



REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

1 OGGTGTCTGOC GGGCTCAGOC COGTCTCTCTC CTCTTGCTOC CTGGGCGGG
51 OGGGGGTGAC TGTGCAOOGA OGTGGGOGG GGGTGCACOG OGGGTGOGC
101 OGGGCGGCA GCATGGCCAC CAGCGCACCC TGCACCGGT TCACCGAOGA
151 CTACAGCTC TTGGAGGAGC TTGGCAAGGG TGCTTTCTCT GTGGTCCGCA
201 GGTGTGTGAA GAAAAOCTOC AOCAGGAGT AOCAGCAAA AATCATCAAT
251 ACCAAGAAAT TGTCTGCOOG GGATCACCAG AAAGTAGAAC GTGAGGCTOG
301 GATATGTGCA CTCTGAAAC ATOCAAACAT CGTGCGCTC CATGACAGTA
351 TTTCTGAAGA AGGGTTTCAC TACCTGTGT TTAOCTTGT TACGGGCGG
401 GAGCTGTTTG AAGACATTGT GGOCAGAGAG TACTACAGTG AAGCAGATGC
451 CAGCACTGT ATACATCAGA TTCTGGAGAG TGTTAACCAC ATOCACAGC
501 ATGACATGTT CCACAGGGAC CTGAAGCCTG AGAAOCTGCT GCTGGGAGT
551 AAATGCAAGG GTGCGGCGT CAAGCTGGCT GATTTTGGGC TAGOCATOGA
601 AGTACAGGGA GAGCAGCAGG CTGTGTTGG TTTTGCTGGC AOCAGGCTT
651 ACTTGTGCGC TGAGGTCTTG AGGAAAGATC CCTATGGAAA AOCTGTGGAT
701 ATCTGGGCT GCGGGGTCTT OCTGTATATC CTCTGGTGG GCTATCTCTC
751 CTCTGGGAT GAGGATCAGC ACAAGCTGTA TCAGCAGATC AAGGCTGGAG
801 OCTATGATT CCATCAOCA GAATGGGACA CGGTAACTOC TGAAGCCAG
851 AACTTGATCA ACCAGATGCT GACCATAAAC CCAGCAAAGC GCATCAOGGC
901 TGAACAGGCT CTCAAGCAOC CGTGGGTCTG TCAACGATCC AOCGTGGCAT
951 CCATGATGCA TGTTCAGGAG ACTGTGGAGT GTTTGGGCAA GTTCAATGOC
1001 CGGAGAAAC TGAAGGTGC CATCTCAGC ACCATGCTTG TCTCAGGAA
1051 CTCTCTCAGT GGCAGGCAGA GCTCGGCGC CGCTCGGCT GCGGCGAGOG
1101 OGGGCGGCT GCGGCGGCA GCTGCAAAA GCTATTTGAA CAAGAAGTCG
1151 GATGGCGGTG TCAAGAAAAG GAAGTOGAGT TCCAGGTGC AOCTAATGGA
1201 GGCACAAAC ACTGTGTGAC ACAAGCTAC AGATGGGATC AAGGGCTOCA
1251 CAGAGAGCTG CAACACACC ACAGAGATG AGGAOCTCAA AGCTGCGCGC
1301 CTGCGCACTG GGAATGGCAG CTGGGTGCT GAAGGACGGA GCTCGCGGA
1351 CAGAACAGCC CCTCTGCAG GCATGCAGCC CCAGCTTCT CTCTGCTCTC
1401 CAGCATGCG AAAACAGGAG ATCATTAAGA TTACAGAACA GCTGATTGAA
1451 GGCATCAACA ATGGGCACTT TGAGGCTAC ACGAAGATTT GTGATCCAGG
1501 CCTCACTTCC TTTGAGCTG AGGCGCTTG TAACTGCTG GAGGGGATGG
1551 ATTTTCATTA GTTTTACTTT GAGAACTTCC TGTCCAAGAA CAGCAAGCT
1601 ATCATATACA CCATCTAAA CCACACGTC CAOGTGATTG GCGAGGAGC
1651 AGGTGCTATC GCTCATATC GCTCACCCA GTACATGAC GGGCAGGGTC
1701 GCGCTGCGAC CAGCAGTCA GAAGAGACC GGGTCTGGCA CGTGGGAT
1751 GCGAAGTGGC TCAATGTCCA CTATCACTGC TCAGGGGCGC CTGCGCAOC
1801 GCTGAGTGA GCTCAGCAC AGGGGCTTTA GGAGATTCCA GCGGAGGTC
1851 CAACCTTGC AGCAGTGGC TCTGGAGGGC CTGAGTGACA GCGCAGTCC
1901 TGTGTTGTTG AGGTTTAAAA CAATTCAATT AAAAAAGCG CAGCAGCCAA
1951 TGCAAGCGCC TGCATGCAGC CCGCGCGCC GCGCTGCTG TCTGCTCTG
2001 CTGTACCGAG GTGTTTTTTA CATTTAAGAA AAAAAAAAAA AAAAAAAAAA
2051 AAAAAAAAAA A (SEQ ID NO:1)

FEATURES:

5'UTR: 1-112
Start Codon: 113
Stop Codon: 1808
3'UTR: 1811

Homologous proteins:

Top 10 BLAST Hits

	Score	E
CRA 88000001156376 /altid=gi 7434378 /def=pir JC5636 Ca2+/calm...	1083	0.0
CRA 18000004937293 /altid=gi 125289 /def=sp P11730 KCOG RAT CAL...	1066	0.0
CRA 18000005054755 /altid=gi 1657464 /def=gb AAC48714.1 (U7297...	1038	0.0
CRA 105000014644765 /altid=gi 10443740 /def=gb AAG17558.1 AF233...	994	0.0
CRA 105000014644764 /altid=gi 10443738 /def=gb AAG17557.1 AF233...	989	0.0
CRA 18000004903800 /altid=gi 422770 /def=pir A46619 Ca2+/calmo...	986	0.0
CRA 18000005152785 /altid=gi 3241847 /def=dbj BAA28869.1 (D149...	986	0.0
CRA 18000004937876 /altid=gi 631810 /def=pir S43845 Ca2+/calmo...	985	0.0
CRA 18000004937877 /altid=gi 560653 /def=gb AAB30671.1 (S71571...	984	0.0
CRA 105000014644762 /altid=gi 10443734 /def=gb AAG17555.1 AF233...	976	0.0

FIGURE 1A

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BLAST dbEST Hits:

	Score	E
gi 12893350 /dataset=dbest /taxon=960...	1778	0.0
gi 12790010 /dataset=dbest /taxon=960...	1463	0.0
gi 10142161 /dataset=dbest /taxon=96...	1443	0.0
gi 10158540 /dataset=dbest /taxon=96...	1366	0.0
gi 12796371 /dataset=dbest /taxon=960...	1356	0.0
gi 12340179 /dataset=dbest /taxon=96...	1320	0.0
gi 9342125 /dataset=dbest /taxon=960...	1185	0.0
gi 12386814 /dataset=dbest /taxon=96...	1180	0.0
gi 12421686 /dataset=dbest /taxon=96...	1172	0.0
gi 12886387 /dataset=dbest /taxon=960...	1063	0.0

EXPRESSION INFORMATION FOR MODULATORY USE:

library source (from BLAST dbEST hits):

gi|12893350 Placenta
gi|12790010 breast
gi|10142161 Skin melanotic melanoma
gi|10158540 Ovary adenocarcinoma cell line
gi|12796371 breast
gi|12340179 Uterus leiomyosarcoma
gi|9342125 Lymph Burkitt's lymphoma
gi|12386814 Small Intestine duodenal adenocarcinoma
gi|12421686 Breast mammary adenocarcinoma
gi|12886387 placenta

Tissue Expression:

Human fetal whole brain

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1 MATTATCTRF TDDYQLFEEL GKGAFSVRR CVKKTSTQEY AAKIINTKKL
51 SARDHQKLER EARICRLKH ENIVRLHDSI SEEGFHYLVF DLVTGGELFE
101 DIVAREYYSE ADASHCIHQI LESVNHQH DIVHRDLKPE NLLASKCKG
151 AAVKLADFLG AIEVQGEQQA WFGFAGTPGY LSEVLKRPD YGKPVDIWAC
201 GVILYILLVG YPPFWDEDQH KLYQQIKAGA YDFPSPEWDT VTPEAKNLIN
251 QMLTINPAKR ITADQALKHP WVOQRSTVAS MMHRQETVEC LRKFNARRKL
301 KGAILTTMLV SRNFSVGRQS SAPASPAASA AGLAGQAAS LNKKSDDGGV
351 KKRKSSSVH IMEPQITTVH NATDGIKGST ESCNTTFEDE DLKAAPLRTG
401 NGSSVFEGRS SRDRTAPSAG MQQPSCSS AMRQETIKI TEQLIEATNN
451 GDFEAYTKIC DPGLTSFEPE ALGNLVEGMD FHKFEENLL SKNSKPIHTT
501 ILNPHVHVIG EDAACIAYIR LTQYIDGQGR PRTSQSEETR VWHRRDGKWL
551 NVHYHCSGAP AAPLQ (SEQ ID NO:2)

FEATURES:

Functional domains and key regions:

[1] PDOC00001 PS00001 ASN_GLYCOSYLATION

N-glycosylation site

Number of matches: 4

1	313-316 NFSV	(residues 313-316 of SEQ ID NO:2)
2	371-374 NATD	(residues 371-374 of SEQ ID NO:2)
3	384-387 NTTT	(residues 384-387 of SEQ ID NO:2)
4	401-404 NGSS	(residues 401-404 of SEQ ID NO:2)

[2] PDOC00004 PS00004 CAMP_PHOSPHO_SITE

CAMP- and cGMP-dependent protein kinase phosphorylation site

Number of matches: 5

1	33-36 KKTS	(residues 33-36 of SEQ ID NO:2)
2	48-51 KKLS	(residues 48-51 of SEQ ID NO:2)
3	259-262 KRIT	(residues 259-262 of SEQ ID NO:2)
4	352-355 KRKS	(residues 352-355 of SEQ ID NO:2)
5	353-356 RKSS	(residues 353-356 of SEQ ID NO:2)

[3] PDOC00005 PS00005 PKC_PHOSPHO_SITE

Protein kinase C phosphorylation site

Number of matches: 3

1	47-49 TTK
2	51-53 SAR
3	410-412 SSR

[4] PDOC00006 PS00006 CK2_PHOSPHO_SITE

Casein kinase II phosphorylation site

Number of matches: 12

1	36-39 STQE	(residues 36-39 of SEQ ID NO:2)
2	51-54 SARD	(residues 51-54 of SEQ ID NO:2)
3	79-82 SISE	(residues 79-82 of SEQ ID NO:2)
4	94-97 TGGE	(residues 94-97 of SEQ ID NO:2)
5	109-112 SEAD	(residues 109-112 of SEQ ID NO:2)
6	385-388 TTTE	(residues 385-388 of SEQ ID NO:2)
7	386-389 TTED	(residues 386-389 of SEQ ID NO:2)
8	387-390 TEDE	(residues 387-390 of SEQ ID NO:2)
9	404-407 SVPE	(residues 404-407 of SEQ ID NO:2)
10	410-413 SSRD	(residues 410-413 of SEQ ID NO:2)
11	465-468 TSFE	(residues 465-468 of SEQ ID NO:2)
12	534-537 SQSE	(residues 534-537 of SEQ ID NO:2)

[5] PDOC00008 PS00008 MYRISTYL

N-myristoylation site

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Number of matches: 4

- 1 302-307 GAILTT (residues 302-307 of SEQ ID NO:2)
- 2 375-380 GIKGST (residues 375-380 of SEQ ID NO:2)
- 3 378-383 GSTESC (residues 378-383 of SEQ ID NO:2)
- 4 400-405 GNGSSV (residues 400-405 of SEQ ID NO:2)

[6] PDOC00100 PS00107 PROTEIN_KINASE_ATP
Protein kinases ATP-binding region signature

20-43 LGKGAFSVVRRCVKKTSTQEYAAK (residues 20-43 of SEQ ID NO:2)

[7] PDOC00100 PS00108 PROTEIN_KINASE_ST
Serine/Threonine protein kinases active-site signature

132-144 IVHRDLKPENLLL (residues 132-144 of SEQ ID NO:2)

[8] PDOC00364 PS00402 BPD_TRANSP_INN_MEMBER
Binding-protein-dependent transport systems inner membrane comp. sign

405-433 VPEGRSSRDRTAPSAGMQPQPSLCSSAMR (residues 405-433 of SEQ ID NO:2)

Membrane spanning structure and domains:

Helix	Begin	End	Score	Certainty
1	195	215	1.665	Certain
2	319	339	0.818	Putative

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BLAST Alignment to Top Hit:

```
>CRA|88000001156376 /altid=gi|7434378 /def=pir||JC5636
      Ca2+/calmodulin-dependent protein kinase (EC 2.7.1.123)
      II gamma-E - human /org=human /taxon=9606 /dataset=nraa
      /length=556
      Length = 556
```

Score = 1083 bits (2771), Expect = 0.0
Identities = 534/577 (92%), Positives = 539/577 (92%), Gaps = 12/577 (2%)
Frame = +2

```
Query: 113 MATTATCTRTDDYQLFEELGKGAFSVVRRCKVKTSTQEYAAKINTKKLSARDHQKLER 292
      MATTATCTRTDDYQLFEELGKGAFSVVRRCKVKTSTQEYAAKINTKKLSARDHQKLER
Sbjct: 1 MATTATCTRTDDYQLFEELGKGAFSVVRRCKVKTSTQEYAAKINTKKLSARDHQKLER 60

Query: 293 EARICRLLKHPNIVRLHDSISEEGFHYLVFDLVTGGELFEDIVAREYYSEADASHCIHQI 472
      EARICRLLKHPNIVRLHDSISEEGFHYLVFDLVTGGELFEDIVAREYYSEADASHCIHQI
Sbjct: 61 EARICRLLKHPNIVRLHDSISEEGFHYLVFDLVTGGELFEDIVAREYYSEADASHCIHQI 120

Query: 473 LESVNHIIHQHDIVHRDLKPENLLIASKCKGAAVKLADFLGATEVQGEQQAWFGFAGTPGY 652
      LESVNHIIHQHDIVHRDLKPENLLIASKCKGAAVKLADFLGATEVQGEQQAWFGFAGTPGY
Sbjct: 121 LESVNHIIHQHDIVHRDLKPENLLIASKCKGAAVKLADFLGATEVQGEQQAWFGFAGTPGY 180

Query: 653 LSPEVLRKDPYKGKPVDIWACGVILYILLVGYPPFWDEDQHKLYQQIKAGAYDFPSPFWDIT 832
      LSPEVLRKDPYKGKPVDIWACGVILYILLVGYPPFWDEDQHKLYQQIKAGAYDFPSPFWDIT
Sbjct: 181 LSPEVLRKDPYKGKPVDIWACGVILYILLVGYPPFWDEDQHKLYQQIKAGAYDFPSPFWDIT 240

Query: 833 VTPEAKNLINQMLTINPAKRITADQALKHPWVQCRSTVASMMHRQETVECLRKFNARRKL 1012
      VTPEAKNLINQMLTINPAKRITADQALKHPWVQCRSTVASMMHRQETVECLRKFNARRKL
Sbjct: 241 VTPEAKNLINQMLTINPAKRITADQALKHPWVQCRSTVASMMHRQETVECLRKFNARRKL 300

Query: 1013 KGAILITMLVSRNFSVGRQSSAPASPAASAAGLAGQAASLNLKKSDBGVKKRKSSSSVH 1192
      KGAILITMLVSRNFS AAKSLNLKKSDBGVK + ++ +
Sbjct: 301 KGAILITMLVSRNFS-----AAKSLNLKKSDBGVKQSNKNSL 339

Query: 1193 L-----MEPQITTVVHNATDGIKGSTESQNTTTEDEDLKAAPLRTGNGSSVPEG 1336
      + MEPQITTVVHNATDGIKGSTESQNTTTEDEDLKAAPLRTGNGSSVPEG
Sbjct: 340 VSPAQEPAPLQTAMEPQITTVVHNATDGIKGSTESQNTTTEDEDLKAAPLRTGNGSSVPEG 399

Query: 1337 RSSRDRTPASAGMQPQPSLCSSAMRKQEI IKITEQLIEAINNGDFEAYTKICDPGLTSFE 1516
      RSSRDRTPASAGMQPQPSLCSSAMRKQEI IKITEQLIEAINNGDFEAYTKICDPGLTSFE
Sbjct: 400 RSSRDRTPASAGMQPQPSLCSSAMRKQEI IKITEQLIEAINNGDFEAYTKICDPGLTSFE 459

Query: 1517 PEALGNLVEGMDFHKIFYFENLLSKNSKPIHTTILNPHVHVIGEDAACIAYIRLTQYIDGQ 1696
      PEALGNLVEGMDFHKIFYFENLLSKNSKPIHTTILNPHVHVIGEDAACIAYIRLTQYIDGQ
Sbjct: 460 PEALGNLVEGMDFHKIFYFENLLSKNSKPIHTTILNPHVHVIGEDAACIAYIRLTQYIDGQ 519

Query: 1697 GRPRTSQSEETRNVHRRDGKWLNVHYHCSGAPAAPLQ 1807 (SEQ ID NO:2)
      GRPRTSQSEETRNVHRRDGKWLNVHYHCSGAPAAPLQ
Sbjct: 520 GRPRTSQSEETRNVHRRDGKWLNVHYHCSGAPAAPLQ 556 (SEQ ID NO:4)
```

FIGURE 2C

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Hmmer search results (Pfam):

Model	Description	Score	E-value	N
PF00069	Eukaryotic protein kinase domain	309.5	4.1e-89	1
CE00022	CE00022 MAGUK_subfamily_d	295.5	3.9e-87	1
CE00359	E00359 bone morphogenetic_protein_receptor	14.8	0.0017	1
PF00534	Glycosyl transferases group 1	3.3	9.1	1
CE00031	CE00031 VEGFR	0.3	3.2	1
CE00292	CE00292 PTK_membrane_span	-59.7	1.5e-05	1
CE00287	CE00287 PTK_Eph_orphan_receptor	-63.5	0.00035	1
CE00291	CE00291 PTK_fgfr_receptor	-90.9	0.0016	1
CE00286	E00286 PTK_EGF_receptor	-131.8	0.0056	1
CE00290	CE00290 PTK_Trk_family	-154.9	0.00012	1
CE00016	CE00016 GSK_glycogen_synthase_kinase	-180.4	1.2e-06	1

Parsed for domains:

Model	Domain	seq-f	seq-t	hmm-f	hmm-t	score	E-value
PF00534	1/1	31	65 ..	161	195 ..]	3.3	9.1
CE00031	1/1	133	161 ..	1068	1093 ..	0.3	3.2
CE00359	1/1	132	186 ..	272	327 ..	14.8	0.0017
CE00286	1/1	14	252 ..	1	263 []	-131.8	0.0056
CE00290	1/1	15	253 ..	1	282 []	-154.9	0.00012
CE00291	1/1	14	267 ..	1	285 []	-90.9	0.0016
CE00292	1/1	14	267 ..	1	288 []	-59.7	1.5e-05
CE00287	1/1	14	270 ..	1	260 []	-63.5	0.00035
PF00069	1/1	14	272 ..	1	278 []	309.5	4.1e-89
CE00022	1/1	10	305 ..	13	316 ..	295.5	3.9e-87
CE00016	1/1	1	345 [.	1	433 []	-180.4	1.2e-06

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1 TTG000CTGG CCTGGTCTOC CTGATCAAC CGG00CTGAA GGGTTTCTTT
51 CTAATAATGG CCTGGTGTCT TG0GCAAGTC TAGACTGTCA GCT00CAGAG
101 GGAAGG0GGC TGGCAGCTGG CTCTG0GCAG GCTGGGGGGG OCT000GGG
151 GTGCAG0CTG GCACAGGCTC CTTGACCTTG GCTCTCT0OC CACGTGCTAG
201 GAG000GGTT GGGGGCT0GG GAC00G0GTG TAGGAC00GT CCAGAGAGGT
251 CAGTGGTCCA GACTOCTACA CTCTAACAC ATGCA00CTC GCATGCA0GT
301 T00GAG00C G0G0GGGGTC 0G0000GGGA CAAG00CATA AGT0G0GAAC
351 CTTC0CAGNN NNNNNNNNN NNNNNNNNN NNNNNNNNN NNNNNNNNN
401 NNNNNNNNN NNNNNNNNN NNNNNNNNN NNNNNNNNN NNNNNNNNN
451 NNNNNNNNN NNNNNNNNN NNNNNNNNN NNNNNNNNN NNNNNNNNN
501 NNNNNNNNN NNNNNNNNN NNNNNNNNN NNNNNNNNN NNNNNNNNN
551 NNNNNNNNN NNNNNNNNN NNNNNNNNN NNNNNNNNN NNNNNNNNN
601 NNNNNNNNN NNNNNNNNN NNNNNNNNN NNNNNNNNN NNNNNNNNN
651 NNNNNNNNN NNNNNNNNN NNNNNNNNN NNNNNNNNN NNNNNNNNN
701 NNNNNNNNN NNNNNNNNN NNNNNNNNN NNNNNNNNN NNNNNNNNN
751 NNNNNNNNN NNNNNNNNN NNNNNNNNN NNNNNNNNN NNNNNNNNN
801 NNNNNNNNN NNNNNNNNN NNNNNNNNN NNNNNNNNN NNNNNNNNN
851 NNNNNNNNN NNNNNNNNN NNNNNNNNN NNNNNNNNN NNNNNNNNN
901 NNNNNNNNN NNNNNNNNN NNNNNNTGTAA G0CAC0GGCG 00GGGGGGTC
951 T0GACATTA ATTTCAAAT GTTTTCT0CG GTTTGTCACT TGTGGTTTAA
1001 CTATGTTCAA TGGGTCTCAC CAAGCAATTT TGCAAAATAG TTAACITATT
1051 CTCITTTTCT TACATGACTT CTTGACITTT AG0CATAGTT AGGAAAGGTT
1101 TGCTCACTCT CACATTAGAG TAAAATTTAT CCACATTTTC ATCTAGGATT
1151 AGTGCTCATT TTTTATATTAT TATGAATATC TTCTTCATTT GGGGTTTGTT
1201 CATGTATATT CCATGAACAA TGGAG0GGGG TGCAGCATTT TAGCATCAGC
1251 TAT000CTTC CCAT00GCAA TGAGCTGG0C GCTGCAGCAG 0000GG000C
1301 CCA0000CAC 0G0GG0G0C GAG000G0C ACTGCAG00C 0G0000G0C
1351 0G00000CA GACGTTT0CA GAGCTCAGAG TG0GAGCT0C CGTTTGAC0G
1401 GGA0GTCAAG GAAAATAGCA TGGGAAGGGG AGTTCTTGAT GTCTGACTGT
1451 GT0CTCTCTT 0CCTTGCTGT CAGTTGAG0C GGGATGCAGT GAGATGAAAC
1501 0GGCTGTGG GGGGTTTGAG 0CTCACITTG 000CATGGTT GAGGGAGATT
1551 TCTCTTTTCA GGGATGATAC 0CTCTTTTFA ATCTTT0CTT 000GAC0CTT
1601 CAGCTGTTC TGTCTGAGAG AGGGCAGGGT CTCTCTGCTC 0CTTCTG00C
1651 TGGTTCCTTT GG00GGGAC GCAGGGCTGT CTGAGATGCA GCAGGTGTGT
1701 GTTTTCAGCA T0G00CA00C GCT0CTGATG TGCAG0CTGA GGTGGAGGCT
1751 GTTG0CTTGC 0CAGGGACTG GATGAGGGGG TGGGAG0G0G GCA0G0CA0C
1801 CACATCTGTT CAGTGT0CTG 0GGTGG00G GT0CTTTTGC CTCAITGTTG
1851 ATGGTGGTGG TCACAG0G0C GGTGTGTGTG CATGTACGTG AGTGTGACTA
1901 GAGGTCTGGT GGTGGGAGCA TCAT0GT00C CAGACTTGAA GTGTGTCTGT
1951 GTCACTCTGC 0CTGCT00GT GT00CAGTTC TTTT000CTT CT00CT0CAG
2001 GGGTGCITTC TCTGTGGT0C GCAGGTGTGT GAAGAAA0C T0CA0GCAGG
2051 AGTACGCAGC AAAAATCATC AATA0CAAGA AATGTGTCTG 00GGGGTGAG
2101 TGTTC00CTGT CTTGAC0CTCT T0CTGAGGGT G0CT0CAGGG G0CATGGTTT
2151 CTTTGTAGGA AG000CAGGA ATTGGGGGTT GTG0GTTTFA GCACITGGAG
2201 AGGAGTTGGA ATTTCA0ACT GGTGGGACTT TGTGTCA0GC TGAAG0CAGA
2251 AAAGGAGTTG CATGGGGGAC TGAAG0G0C CAGGTACAAA AGAATGAAGG
2301 AAGAGATGCA AGTAGCTGCA GTGG000CCA AAGGCTCAGG GGAGTT0GGT
2351 CTTCA0GGAG GTGGAGGATA TGGGGGTAGT GGGTGGTACA GAATGGGGAG
2401 CTCTTAATTT GGGCATTTTG GAG0CTCT0C CTTTGGGGCA GTGGTGGCTA
2451 CTGCA0G0CT TT0CTGGT0C CTCTCTCA0C A0GGGCTGAG TTAGGATGGA
2501 AATGCAGTAA GTGAGCAGCT CTGACAAAGC CAG0CT000C TG00CA0CAG
2551 G0GGCAGAAC AGACT00CAA GGAAGGGGAA TCTGTAAACA TCAGGGGAGG
2601 CTGCTACTGG 0GAGGGCTTC TCAGGAACAA ATTCTG0CAG ATGAACITGA
2651 TTGCTTTTIT GATCAAATTA CAAAGTTGGT GGTGCAGCAG CAGATGTAGT
2701 CTGT0CTGGG TGGAGGGTGA TG00CTCATG TCTAGAAATC 0CAAAGG00C
2751 GGTTTTGGGA GGAACITGAC TG00T00GAA CTGCACTG0C T0CGAGTCTG
2801 AGGAGCATAA AGG0CAAGGC CTTGGGG0CT CACTTG0GAG AT0CT00CAA
2851 GTA0CTGAGG CTTGGAGGGT CAGGG00CTGT CTTTCA0ACC TTGA00CTAC
2901 ACTCTCTGAA CTTC0TATTG GGTACTTG0C AAACCA0CT CATCTGATAG
2951 GTGTAGAC0C AGCAATGTGT GAAGTGTCTT GGAACAGGT CTGGTGAGTA
3001 CAGAGGT0AG ATCT0GGAGG GCTGCAGGGT GCAGCTGGGG GACAAAGGTT

FIGURE 3A

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3051 GTGAACTCA GAGAAAGGAA TTAGGGCTGG GCAGTAGGAT GGCATAAATA
3101 TATTTGGAGC CAGGACACAT GCOCTGGGGA AGACATGGGC TTGGGCAAT
3151 AATGACACGG GTTCTCTGG GATAAGAGAC ATAATAGATG TOCCAAATGC
3201 TTAGAGAAGC TCTACAAATC CAOGGCTTC TGTOGTGTG GCAGTGTGTC
3251 TGGGACCTGT TTAGCAGGGC CGTGTCCACT COCTGACTGG GGACTCTCTC
3301 TOCATOCTC TGGTAGGGCA CTAATGCTG ACTOOCATOC AGCTOCATCT
3351 CTGTCTGTTC GTGTACATG OCTATAAAGT TGGACTTGTT TGTTTCTTT
3401 CTCTCTGGGT AOCTTGAGTC TGAGGATGGT TGOCATAGAG ATATGTGGGC
3451 AGTCAGATAC OCTGGAGTGG GGGTGGGGG GACAACAGGG GCTGGGCTCT
3501 CTGGCAGACA TOCTCTGGOC AAGGATGGAA GGTGCAGGCA GGAACAATGG
3551 CTGTAGGCTG GATAOCTCTC TTGCOCCAC AGCAGAGOC TGGTGCATCA
3601 GAAACAGGGC TGGCATCTGG TGTCTOCAGT TGATGATGCA ATGCTTTGCT
3651 CTCTTCATCT CAOCAGTGT CTCTGACCCA TGGTAAAGAG AAGGAGAGAT
3701 GGCTGGGAGC CGAATCTCTG GATGTGAGGA TAGGTGATGT GGTGACTTCC
3751 TGCACTGCC TGACTGGGGC TTTCAATTTCC TACTOCTTCC CTACCTGGGT
3801 AAATTTTCAT GAOCCTGTGT ATAGCCTOCC TTTOOCTTCC TCAOCTOCTT
3851 TTAAOCTTGT CCCATCTTTC CCAATGGATA TCTTTTCCCTG GOCAACTGG
3901 ATGAGACTTG ATTTCTCGTT GATTTTCTTT TTTTTOOCTT CAAGAAGAGG
3951 ATTCTTGTGT AAAAGTATAT GCTTCAGACA GCAACTOCC CTCTOCCAAG
4001 ATGGATAATC CAAGACTGGG CTCGTGTGTG TGGOCTCATG TGCCAGGTTG
4051 ACTTTGGGAC AGAGGCACAG ATGATAGGCA CAGATGCCAG CCAGAGGGGT
4101 CAGAAATGTG AAGTGCCAGC CAGTACTGTG TGGAGGTGGG AAAGTGGAAG
4151 GGGGCTGTCT TGGAGATGGA GGAACAAGG TGGGGCTGGA CTATAGGTGT
4201 GGGCATGGGA GATGTGAAGT OCTGGAGAGA TCTGGGOCAG GGTAGOCATG
4251 GGCTGGTTTC CATGGGGTTA GGGAGTGAGG GOCATGGCTT COCTGCAGAC
4301 TCTCAGTTTA CACTATATAT TTTATAAAGG TGCAGCCACT GGAGCTGGGT
4351 TTCACTCATC GCTGTCTGOC TAGGTCTOOG CAGGTGTGAG ATTTCTGTGT
4401 CTGGGAATGT CGTGGGCOCA CCAGGGTCAT CTGTGAAGGT CTGAAGGGGC
4451 TTGCTGTGTT CACTGGGTCT TCCGTGCTCC TGTCTTTCTT GTTTGTGATT
4501 CTCTGGGCTA CAAACTGAAA AGATAAAAAG AGGGTATAGA GCTGTTCCTC
4551 CTTGGCATGC CTGGTGAGGT GGCTAGGAGT CAGGGAGAGG GATCAOCTGT
4601 TCTTCTGGGG GGGTCCAATC GAGACAGGAA GOCCTCTTTT GGGCTGTGT
4651 GTCTTGTAC TGTGGCTCA GAGGOCACA TTGGGGCTA GGTGCAAGG
4701 TGGGGAGTTC ATGGGATAT GGTGTGAGCA CTGTCTTTGT CTGGGGCT
4751 GTCTACATAA AGTCACTGAA AGTCAATATA CGTCACTOOG TTGTCTTAC
4801 AACCGTGATA GGAGTGGAGC TGGGCTCTTA AGGGAGOOCA TGGTTOCAAG
4851 CTAGCTOCA CTAGGCOGAA GGAGCATTT AAAATAGGCT TGGATGCAGG
4901 AGCTAGTGGG CCAGGTGATG GCAATGATAA GTGTGTTT TAAGATTTAA
4951 GAGCAOCCCC CTCAAGGAGC CTGAGOOCTT ATGTCTTTT TATTTTAA
5001 ATCTTCATAT TCOCTCTTA TCTTTATTA TATGCATACA GATTTTCAOC
5051 TCGTGGAGCA TAACATTTTA TATCCTGCTC TCTTTGCTTA TATCOAAAGC
5101 ATTTCCOCCA TATTACTACA GTTGAAGGGC AAATGGTCTT TTCTCTACG
5151 TGTTTTAGGA TTTATOCTA AAACAATCAG CATCACAAGA AACTTCTGTA
5201 TATGTACCAT TTATCTGGAT TOCAGTTGCT TTTAOCAGA TAGATACTGG
5251 GGTAAATGOC TTGGCCTTAC TAAGAGATGC TACCGGAAC AGTGTTTTGA
5301 AATCTGTAT AATACTTTAA CATATTTAT TAATCTGTAC ATTCOCTGTG
5351 AAGAAATTTT TTTTGAAGCT AAATGTAAGC AAAAGCTTTC CTCTTGTGA
5401 GGACCTGAGA GGTGAGGGAA GGTCTCTAT GTGTCTTAT ACTTCTGCAT
5451 GGGCAGGOC TAGOGAAGTG OCTGAOCTAT GOCAGOCACA TACACATTA
5501 ATGAATGGGT CAAGAGGACT ATGTAACCAA TCATGGTTGC CTTTGGCTT
5551 TGGCTOCTAG GAACTCAGA GTCAAGTTGC CAGAGCOCTT GTACCTGTCT
5601 ACAGACTTGG GTCTOCTT TCTGATOCAG GGAGOCAAGC TGCAGACCTG
5651 ATAOGGCTGC TGGAAAGAG GACAGATGAG GATAAAGACC TGTGCTTGGG
5701 GCATAAGGCA GAGTGGGAGA TGTAGGCAGA CATTTAGCTG ATGATTOCTC
5751 CTTOOCTGTC ACTAAATGGC ACTATAGGGC CACTGTGTGG ATCTCTTCA
5801 GGTAGTGATT TTCAATTTTA GTGTGOSTAA GGATCAOCT GAGTACTAGT
5851 TTAAAAAATA CAGACTTCTG GGCTTTAGCC ACAGAGATTC TGCTTTAGGA
5901 GGTCTAGGGT GGAGCTGCAG AATCTGCATT TTTAACACAT GCTOCAGTGA
5951 ATTTTCATGCA GGTGAGGCAT GAGCCACTCT TTAAGAGATG CCAOCTAAAA
6001 TCTGCAACAA CAGTTGCTCT TGOCATGOC TCTGGAATTC AACAGACACA
6051 OCTTGGCOCA TCCCTCTOCA GATTGTGTGT CTGOCATAT GTGGOCATCT

FIGURE 3B

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

6101 GTGCACATGG GCTGTCTCTGT GATTAGGGGC CTGTTTCTGG GCTCTGGGAT
6151 TGGGGTGTCT GTGTCTGAGG CTGGGGCAAG CTGGGTGGCT CGGGTGTGG
6201 CATGTTGGCC ACCAGAAGGG TAAAGGCTGT CCTTTTCTGG GTCCAGCTGG
6251 CCTGGGGAC TGAATGGGA TCCCCGGAT GGTGCCAGCT GAGAGTCCCC
6301 GCCCCCTTAG TGTGGGCTG AGTAGCCCC ATGACATTTG TGTCCCCGT
6351 GGTATCTOCA AGTGAGACTT TOCTGTTAAG GATCTGGGIG AAGTGAGGGA
6401 AAGAGAAGGG AGGGGGAAGC AGTAATGCAG GGAGTGGGAG AAGGAAGAGA
6451 AATOCACACA GCACTGGAAC ACAGGCTOG AGGAAGCAIT TAAGGAGGCT
6501 GTGTGGGAAA CCAATGCTTTC CTCTGAGGA TAAAACAGGC CAATTTCTGT
6551 AAACAGAGAT ATGGGCATOC TGCAATACAG TGATGGAGOG CCTCTACTTT
6601 CTCTCTCTGA GGGATGGAAG CCGACTGCAG GTCCCTCTGT GCAAAGGCTT
6651 CTGCCAGGOG GCTTTTGTCA CGGGTTCAG TTGAGCTGTG GGCTTAGCA
6701 CACACAACAC TGGCTGTTC CCTCCCCC CCACTGTCT TCCTAGAGTG
6751 ACTTGGGGTG CTGCATCATG GTGTGGGGAT GGAGGTGGGA AGGTTGCCCT
6801 GTCTGTCTAG GGAGGCCCTT GCTTCTTTC TGCTGTCTTC TCTGTTCCT
6851 TGTCAACATA CCTTTGTTCG AAGCTGTGCT GAAACCTAG AGGTGAGTGG
6901 CTGACCCCAT TCTCTGCTGA GACTGGAGAT AGGGAAGGG AGGCTGGGIG
6951 TGAACATTTC TGCTCCCATC TGTATGCTTG CTGCTCTCTG AACAGCTTTG
7001 GCAGACCAAC AAGGGCTGA TCCCATGGGT GCCAAAAGGG TGGTGACAGG
7051 AGGAGATGGG CACTTTGCAC CTCITGAATG CCTCTCTGCA GAGCCCCCTT
7101 GTCACTTACC CATGGCCAGA CAGATCTGCC GCAGGACCCG TGGGGAATC
7151 AAAGCACAAA AGCTTTGTCT GGGGTCTTTT TTTTCTTTT TGGTTTGTG
7201 CTGAGGTGC CCAATGACTTT GCGAGGGCTC AGAACCAGOG TOCTCAGGOC
7251 GTGTGGCTC CACCCACTOC TTGGGGCTT TCTTTTAAAC ACAGGTCTCTG
7301 GATACTTTGT TCCTGTGATG AATCTTGGCA TATCACTCA CACTCTOCA
7351 TCTAGGCCCC AAGCTOCAAG CCTGGTGGAG CAAATCCCTC CTGTTGCTG
7401 GCTGAGGOC CATTCCTGTC TGTACCCACC TCTCTGGGCT GTGGGGTGG
7451 GAGATTTOCA GCACTCTCTC CCCAACACCA TCTCCGCTTC CTGGGCOCTA
7501 TCAGCAGCAG CCGCAGCTTC CCACTGTCTC CCTCTTTTTC TCTCCCTTT
7551 CTTTCCCTTC CCCCCCTCTT GCTGCTGCC TGGGAGGAGC TATTTTTAGG
7601 GCTGTCTTTC TGGGATGTTT TACTTGGGCG TGGTTACCAT GAAGGAAATG
7651 TCACCAAAAC AGTGGGCAAA GGTGTCAGGC ACOGGGAGOC CTGCCGGGG
7701 GCATGGAGAA CAGAOGGCTG ACOCTTTTCT GGCCCTTGAG AGCAGCCAGA
7751 GTGCCCCCAG GCAGAGCCCTT GCTTCTTGG GGTCTGTAG TGAOCCCTG
7801 GGGATTTTCT CTGTCAAAGC TGATTGAGGG CCTTTTGGCT ATAGGGCAIT
7851 TCTTGGAGOC TCTGCTTTC CTTGCCCTGA GATOCAGAG CCAAGTGGG
7901 GCTCAGGTGT TGTGTCAOC AAGTTTAAAC TGTCTGAGTG AGGTTGAAG
7951 ATAAGGGGAG GATGCTGGGT ACATGCACAG AGCCTTGGGG GTTCACATGG
8001 GAOCATTTCA GGGCCCTTC CTCGTATCA CAGCCCCCAG CTAGTCAACA
8051 GGTGTACATG TGTGAGGGCA TTAGAAACCA TGGTCTGCT CTTGTGTGTC
8101 GGATGGACTT TGCTTTTAAT TGGAGACTCT TTGCATCTTT AGAGTGAGAT
8151 TCAAAGAGGA AGGGATGTGG CATCACAGTG TCAGGGTGTG GTGGTGGGA
8201 TGTGGGCTTG GGAITCCAC TGGTCACTGT CCCAGGCCA GGGCTGTGCA
8251 TAAGCAGCTG GGAAGGTGG ATTATGACAT CAAATCCCTG OGATGTCTT
8301 GTTCTGTCTC CTCAGAGTGC CAAGGGGACC AGACGGGGC CTCTGCTGCT
8351 TGGGAAGAAG ATGAAAGGCA CTCAGGAGGG CAGCAAGTGA GGCCGCTOC
8401 CATGGAGOC TGAATCAGT GGGGTGTCAG GAAGTTTCTC ACATCCATGT
8451 TTAGGGTCAT AGGCACAGAC CTGCAAAATA CCTTTGCAA AGTTAAGAAT
8501 GTCTTTGAGA TTGGAACCTG GGAGAGTCT CAGTCAAGT AGGAATGTG
8551 ATCTTTTCC ACGTACAGAG GATTGTATGT TTAAGTGGCA GCAGGATCTT
8601 APTTGAAGCT AGTGTGGCA TTTGTGTTT TTTTGTAGGA AAATGTACT
8651 AAGTCAAGCA GGGCCATCC TGAGAGGGCC ATGGAGAATC TGTGGCCAGC
8701 CCTCCCTGGC CCCCCTGACT GGCAGAGGAA GGAAGGGCA TTGGAGTAGG
8751 CTCTGTCTCT CAGGCCAGAG GGGGAGGTGG TTCAGGGGCA GGTCTGTGTC
8801 ACOCCCTGGC TGCAAGCTAT CACTCCCTA TCTGCTTCT CTTTCTGTC
8851 TCCCTGGTG CATCTGGTCA CTTCTGTCT CCTTCTCTG GAAATGTGG
8901 CACTTGCAC CAGTCTGGA AGCACTTGGG CAGAAGGGG GAGAGGTGG
8951 GTTCTAGGA TCCCTGTCTC CCAGGGGCTG GCTCTGGCT GGGCTCAGAC
9001 CACTCTGGTC TAGGCAGGCT GCTGGGGAAA GGTGGAGCT GCTTCTGCTT
9051 TCTGCTCTG TTGCCACTC TGCTAATGAT GGGGAAAAC TGCAGAGGC
9101 TGTGGTGGGA GCTGGGCTGA AGGCGGCAG GGTGGGTCT CTCCATGGCA

FIGURE 3C

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

9151 GTAGCACACA GGCAGGCAGG AAGTGGGCGT GTGCAAAAGC GGGAGTGGC
9201 AGTTGTCAA CAGGAAGGGG GGGGCTGGGC TGTGGGAGGG GGGGGATGA
9251 GCGTGGTAGA AAGGTGGGTG GAGGAGGGTC CAOCTTGGAA GGTCTGAGCC
9301 TCTOCTAGT GGTACTGGA AGGAGGGGTG TCTCAAGGG AGACAOCTTT
9351 GCAGCAOCTT GAGATGCGA GGCAGGGGCC TOOCTACTGT GACCAAGGCC
9401 ATTCACTGGC CTGGGCTTTT TTGGGGTTGG AGATGCTGGC TOCAGCTGGG
9451 ATGCGCTTGC TTTTGGGAAA GATGCTCTAG AAACACTAC TOCATCTGG
9501 AACCGCTCTG CTGGCACTGC TGCTGGGATG GACCGCTCTG TTTTCTGAG
9551 CCGTGGGCGA GCGCTGGATG TGACTACAGG ACAGGAAGTG TCAGGGGAAG
9601 AGACAGGAGA CAACAGCTGG AGAGGCTGGG TGGTGGGCGG GCAGTATGTG
9651 GCAGCAGGAA CGGGGAGAGC GGGGCAGGTA GAACTGCTC TGTTCATTGA
9701 GGAGAGCTTG TGGATGGCAG GGTGCCACGG CTGCGAGGAA GAGGAGGGAA
9751 GGGGACAGTG GCACCTCTCG CGGGTTTCC CTCTCTCTGA GGAGCGCTG
9801 TTGCTGCGCA TCACTGCGAG ACTGTAGACA CAGGTGGGC CGGCAAAAC
9851 AGGAGGGGAC ACTCAOCTC CAGGACTGCA ATGGAGGAC ATGTGGGGAG
9901 CCGAGAAGCC AGGCAGGAGG GCTTAGTTGC TGTGTGCGAG ACGCTGCATC
9951 TGCGTGGGCT GAGGGGACAG TGGGTCCCAT TCACAGTGTG TCTGGTGATA
10001 GCTGTGGCGA CAAGCGGAGC CCAGGAGAC CTGTCAAGCT TCTCACTGGG
10051 CCGTGGGAAA GGAGCTATAT GCCAGAOCTT ATGCAAAACT CTGCACTGT
10101 ACGAOCTCAG TTAAAOCTCA GATCTTGTCT TCTCTATTTT AGAAGTGAGG
10151 AACCTCTTGG CGGGTGGCG TGGCTCAOCC CTGTAACTCC AGCACTTTGG
10201 GAGGCGGAGG CAGGAGGATC ATAAGGTGAG GAGATGAGA CCACTCTGGC
10251 TAACACAGTG AAACCGGCTC TCTACTGAAA AATACAAAAA AATTAGCGG
10301 GCATGGTGAT GGGGCGCTGC AGTCCAGCT ACTCGGAGG CTGAGGCGAG
10351 AGAAGGGCGT GAACTGGGA GCGGAGCTT GCAGTGAGC GAGATCATGC
10401 CACTGCACTC CAGCTGGGC AACAGAGTAA GACTOCATCT CAAAAAAG
10451 CAAAAAAGC AAACAAAAGA AGTGAGGAAC CTCTTTTCCA AGATAATGTG
10501 CCGGCTCAC TGTCTCAOCT ACTTGGGTC CTAATCAAAT GTCACCTCT
10551 TACTGAGGCT TTCTTGGACT GCGCTACTCA AATCTGCACT CCGCACTTC
10601 TCTGCTTTT CTAGCGAGCA CTGCGGTA CATCTAACT GCTGTGAGT
10651 TTTCTTACTG TCCATCCCTC CCGCATACAC AACCACTAG AGTGTCAGT
10701 CCAAGAGGC AGGGATTTT GTCTGTTTGT TTGCGCACTG TCTTCTAGC
10751 ATCTTGAATA CTGTCTGTA CATAGTAGG CTGAGTAAAT ATTCTTTT
10801 TTTTCTTGTG TTGCTCTGTC ACGCAAGCT GGAGTGTAGT GCGCAATCT
10851 TGGCTCACTG CAGCTCCAC CTCTGGGTT CTAGTGAGCA CATTTGGCTA
10901 AATTTTGTAT TTTTAGTAGA GATGGGTTT TGCAATGTG GCCAGGCTGG
10951 TCTTGAATC CTGACCTCAA GTGATCAAC CAOCTTGGC TOCCAAGTA
11001 CTGAGCTGGG ATTACAGGCG TGACCAOCC CGCCAGCGA CGATAAATAT
11051 TTCTTGAAGG AATGAATGAA GCTCGGTTG GTTTAATAGC TTGCTGGATG
11101 TGGCAGTGT GGGCTCAATC CAGGCTGTG TGACTTCAA ACGATGTGT
11151 TGTTAATTGC CATACTCAC AGCTTAGAAT CAGAATGAG ATCAAGGTAT
11201 AGTCTGGGG TTCAAGAGAG ACGTGGGCT TGCGGGGAG ACAGGCTCA
11251 GCTCTTGA GTTAAGGCTG AACTAAGAG CTAACAAGGA CCGCTGGAT
11301 GCTGGGCGC TCGTTGAGG AGCTGGGAG CTGAGTCTGT GTATCTTCTC
11351 TCCACTCAA GTCACTGGTA AAGCAGAGT CCGTTATTTT TAGTCTGTT
11401 GCTGTTGTGG GACTGTAAOC ATTAGCTAGT AAGAGACTTA AGGAAGGAGA
11451 TAAACATTA TCTTCTGGGC CTTOOCTCAG CTGCAOCTC CGCATGCAA
11501 GATGCTGTTC TCGTCAOCT GCGCAGGCA CCAAGCGTA GAGTTATGG
11551 CTGAGGGTG GTGAGGTTT TGCGCAGAG GAGGGCGTG GGTCTGTAGC
11601 TTTGGGGCTG CTTGGCTTGG TAOCTOCATC TCAAGTCCAG GGATGGAAG
11651 AAGGTGGGCT CATGTCAACA TCGTCCAGA TCTGGAAGAA GCAAGCGGCC
11701 CAGCACAGG GCAAGGCTGT TACAGCTCC TTGAGTGCT CGCTCTGGA
11751 GGTCACTGGC CACATCCCTG TCGCTGGGAC CAAGGGATGC CAGGTGATCT
11801 GGGAGTTGGG AGTTACTTGG GGTCTCTCTG CCGTCACTCT GGTGGTGGT
11851 CATGCTGAAC CAGGCGACAG GAAGGAAGGC CTGACCGAGA TCTTTGGGA
11901 GCTGGGAAG ATTAGCTGG CAGCAGGAAC TAATCTCTGT CTGTCCCGC
11951 CTCTTTTCC AAAGTAGAGC TGTGCTAGA GGGAAAGTT AGGACAAAGC
12001 TGGGTTGGT TAGTGAAACA ATAAATGTGA ATTTCTTCTA GTCCATAATC
12051 CTTACATTA CTCACACTGA CAGTCTGAG TTTGAATCC CTTTATATC
12101 CTTTCTGCT GTGGGATCT GGGCAAGTA CTTAATCTC CTGGGCTCC
12151 GTTCTTCCA TCATCTGGA ATGTGACAA TCATAGCAT TAOCTAATG

FIGURE 3D

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

12201 GATCATTTGIG AGGGCTGTGG GAAGATTTTAC AGAAGCTTTT TGCTGTTTAG
12251 GGTAGAGGCA GGGAGACAGG AATAGCTTGG CAGCTATGGA TGTGAAGGOC
12301 OCTGOCOCGG OCTGGATAAT TCAGGGTGAA CTGGACTCTC TTCTTTTTCG
12351 ACOOCTCOCA AAGOCITAGAG TCITTAACICA ACTCTCAOCA TTCTTTATCT
12401 GGOCATATAA GCACAGGGGT GGAGAAAGAG GGCTCTAGGC TCAGACCACC
12451 TGCATCACTG OCTGTTGTG TTAOCCTTAGG CAGATTACTC TATCTTTTITA
12501 AAOCTGTTTC CTGGTAATA TAATAGAGCT AATCAGATOC CTACTTCACA
12551 GAGTTTCTGT AGGTATGAAA TATGGTAATC CATGOCCTCTG OCTGACATGT
12601 AGTCAGTGCA TAGTAAGOGA TTGTTATGGC GACTACTGTT ATTAGTAAC
12651 CCTTATTAAG COOCTGTTTA CAGAAAGAAC TCTAGAAAGC ACTAOCITGA
12701 AAGGTACOC OCOCITOGAA GAGCTTGCAA CTGAAAGATA ACTGATGTAA
12751 TATATGATGT GAGAATGTG AGAAGTGCAT TGGGAAATOG GGGGGGGGGG
12801 GGTGGAGTAG GAGGGAGAAG TCACAGTCTA COGAGAGGAG CAGGGAAGAC
12851 TTCATGAAGG AGGTGACTTT TGGCAGGATT TCAGCAAGTA GAAAGAGGGA
12901 AGGACAGTGG GGGAGGGCTG TGAGGOCCTOC GTGCTGTGAG TAGCATCCTC
12951 TCTTTOCAOG TACTGGAGCT CTGOCCTTCT GTGGAAGGAA TTGAOCCAG
13001 CAGCTCACTT GGATCTGGGG ACTTGTGGAT TTCTGTTTAT TCCACCAAAA
13051 CCAAGTAATC CTGGAGTCTG AATTTGAAGA GGTCAAAGCT TACAGCCATG
13101 GTGGCCAAGA GGACTOOGGG GAGAAGCAGG ATTTGTGTCC TGGTTTCTCT
13151 TTCTATAAAA TGGGCATCAT ACTAATGCA OCTCTAGAT TGTATGAGG
13201 ATAAATTAFA AGAGGCAGCT GOCCTGGTGA GAAGTAAGCT CTCAATAAAT
13251 GTTAGCTATT ATTATTTTAA GTCAATCATTA TCTTGATCAT CAACCTCTTT
13301 ATTATCAGCA TCATTTATGT TCAGGCTTGC CATCAGGACT ATGTAGAGAA
13351 TATATGCAAA ACOOCTAGOC AGTGOOGAGT ATATATTAGG TGCTCAGTAT
13401 AACTTAGCTA TTATTTAGTGT TCTTAACAAG AAAGAGATTC TGGGCCAGGC
13451 GGGTGGCTC ACOCTATAA TOOCAGCAIT TTGGGAGGCC GAGGOGGGTG
13501 GATCAOCTGA GGTCAAGAGT TOGAGACCAA OCTGGOCAC GTGGTGAAC
13551 COGCTCTCTA CTAAAAATAC AAAAATTAGC CAGGOGTGGT GGTGTGTGOC
13601 TGTAAATCCA GCTACTOGGG AGGCTGAGGC AGGAGAATTG CTTGAOCCA
13651 GGAGGOGAAG GTTGCACTGA GCTGAGATCA CAOACTGCA COOCAGOCITG
13701 GGCAACAGAA CGAGACTCOG TCTCAGAAAG AAAAAAGAG ATTTCTGGACA
13751 COCTGGACCA CTGAAAOOCT GTTGTGGTGG AAAGAGCACC AGAGTTTITAG
13801 TTGAATAOCT GGATTCAAAT OCCAGCTCTG CTGCTCACTG GCTGGAAGTG
13851 TGCAAAOOCCT CAAGTCATTT OCTCATCTGG AAAAGGTGGT CATAACTATC
13901 TATCTGGOC AGGOCITGGTG GCTGGTGOCT ATAGTTTCCAG CTATTCAGGA
13951 GGCTGAGGTG GGAGGATTCG TTGAGOCCAG GAGTTTGAAG CTGOCATCAT
14001 GOCACITGAC TOCTGOCITGA GGGACAAAGT GAGAOCCTAA AATGAAAGGA
14051 AAACAAGITG TCTOCAGGAT TGOCATGACT TGCTGCATTA CTTCAGCAGA
14101 TCATCACAAA TGCAATAGTTA GTAOCTGAAC TGAAGGAATA TGAATAACAA
14151 GGTGAOCACA AGGAGAATGG ATGGTTGATG GCTTTTGTMT TTTCTCTTCT
14201 GCTTTTAGAT CACCAGAAAC TAGAAGTGA GGCTCGGATA TGTGACTTTC
14251 TGAACATOC AAACATOGGT GAGTGOCTGG GCATGGAGCA TTTTGTGGGT
14301 ATTTTGTAGA AGCAGGGATA ACAGATATOC ACTGCTTTTG TGTGTGGGAT
14351 CAOCITGTC TGTGGACCTT CAOCTGGTGT CIGTTTTTAC ATGAGCAGGA
14401 TAGCAACTGT GTCTCAGAA TCTGGGGCAT TCTAGTTTAG AGAOCAGAT
14451 ATCTGCATCA CTGOGGCACC TTCTCAGGGC TGGGGTGTGA GGCATCAGAA
14501 TAGGTTTCAG ATGCTATTTT TCOOCTTTCT OCTCTGTCT TTTGGCTGAG
14551 GTCCAGGGTC CTCAGOGTGT GAGGTTCCGG GCTOCTAGOC TGOCAGOGTC
14601 OCTCAOCCAG GGCATOCAC AGOOCCTCAT CAAGGGTCAG GATTTTGTIT
14651 GTGGAOCTGA AAGAGTTTGT TTCTGCTGC GGTGTCTGC ACACITCTGG
14701 GGTTTTCCATG GTGCTOCCAT TTGTATTCC CAGAGOCAGG AAAGCAAGCT
14751 GOCOCCTGTC CTGGCTOCTC TGGCAGAAGG GATGGCAGGA ACCACTCAGT
14801 ATGGGGAGG AGAAAAAGA GGATTTCTOC CTGCTOCCAC OCTGACTGGG
14851 GGGACAAGAG CACATTTGTG GTTGTGCTAA AGOCTGAGGA GGTTTGOCITG
14901 OCTCAOCCA CTCGGCTCA GTTTTACTTT GTTCAGCTGA AATGGTCTTT
14951 GOCAAAAGOG TTGGOCCTGA TTTGGTGCTC CTTGCAGAAG GGACAGAAAC
15001 TGGGCTGGCT GCAGTGTCTG AGCAGAAGOC CCAGTGITGA CTTGAGGCAG
15051 AGCAAGGAGC ATCTOCTAGG TTTTCCCTGA AAGOOCTGAG TCATCACAAA
15101 AGACAACAG TGTCTGTGTC TOCTCAGGCA TGGOCTAAAT CTCAGGGCTC
15151 CCAOOGTGGC CCAGAGGTGG OCTGCTCTGC TCTGTGTGOG GOCAGGGCTG
15201 TGAGGTGACT TGCTGAAGOC TAATGCTTCC TTCAGAGCTA COCAGCOOCT

FIGURE 3E

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

15251 GGCTTCCAG GTCTGGGCT AGAACAGTCA AAGTGAGCTC TGTCATGGAA
15301 GGGCTGAGGT OCTGCTCTAG CCGTCTGGGA GAGGAGCAGC TCTGAGGTAG
15351 TCAGAAAGTC AGCTGTGCAG GCGTTTCTAG ATGGCAATCA GCAGCTTGA
15401 TTACACCGGA AGCAGATTGG TGTCGGCCAGT GGTGATCGGC TTTCGCTGAT
15451 GCAGTGTGTT CTGCAGAGCC AGCAOCTCTC AGCTGGTGGG TTCTGGGCG
15501 CAGAACTACT GGAGCTOCTA GGTGGTTTCT GAGGTTAGGC CTTCAGCTGA
15551 AAACAGGCA GTGGGGACTG ACATGTTGOC TTTGGTAGGA GAGGGGCCAC
15601 AGAGGGAAAC ACCTAGAACA GCAGTCACAG ATTAGGCATG TTTTGCCTGG
15651 CTGACTCAGT GGTCTAAAAA TATTTTTATT ATTTGCCAAT ATTTAAAAAT
15701 GCATTTTAC ATTTTGA AAAAAGAAAAAT CTATTCOCC GOCTTTCCAG
15751 TCAGAAGGCT TGGCTCTGCT GAGCCCCAC CTTCGATGGC CAGAAGGAGC
15801 TGTGAGGAGC GGTGGCTGCC OCTGCAGCCC GCTGGCCACT GTCTTTGTCA
15851 CCGACTATGA GCTCACAATT GCATTAOCCA OCTGGGCCCC TGTAGGCTTT
15901 GCAGGCTTGT GACCTCTAAC CTAGAAGTTC CAGAACAGGA AGAAAAACA
15951 TGTGGGTGAC TAAAGCCACC CATAAGCACA GAAGCATTTT GATGTTCCAG
16001 ACOGGGCTCT CAATATCTGA GAGGGTAAC TTCTTTTCTT TTATGCTCTT
16051 TGTGACCAAC TGGTACAGCA GTGATAATT TTCTCTCATGT AGGCAGGAGA
16101 ACAGCAGCTA GGGGTCTAGT ATGCAGGAAG CAGAACCATG TCACATCAC
16151 CCGGATGCG GGGGGTGA CCAATGGGCG GTTGAOCCAG GATGGGTGG
16201 CCAAGGAGCG GTGAGGCTAT AATGAAGACA ATTGAGAAAT GAGCAGGAAG
16251 GACAAAAATA GAATCTCTAGG TGAAAAAGC OCTAGGTGTC TTTTATTATA
16301 TTTCTAGAAT TAAATACATA CTTTTTACC CCATAGACTT CACTCTGTTT
16351 GGTAGCCCTT TACTTTTACC ATCTGOCCTC GGCTCAGAAAT GGAGGCAGGC
16401 GGAGGGACCA TATATCTGG CCGTCTGCTC AGAGGCCAGG TGGGGCACAG
16451 TCACTCTTTT GGCTCTGAT TTCTAGAAC TGTGCTTCCA TTTCATGACT
16501 GCTCCAGGT OCTAAGGAGG TTGGTCCAG GACCGATTCT GGGGTGAGG
16551 GTGGGCAGAG GGAAGGGGGA GTCAAGACTG TGTCCTGGGA GCTCAGCAT
16601 CCGGTGGGAA CAGGGGCTGT TGGAGATGTG GCGGAGCTGC AGGTCCAGGC
16651 GCGTGTGTT GCGATGGATC TGGAOCTGGC TTGTGGCAGG AGAGGAGGCA
16701 ATTTTGTGOC OCTAATTCAC TATTCCTCTT CTCTCTCCAC TGCGCTGTCC
16751 TTGAGAACTG TGACCTTTT GCGCTGGCC TCTTGAATC CATCCAAAG
16801 GGAACAAAC GGGCCAGCCC AAGAACAGTG CACAGTGGAG GAAGCTAGAG
16851 CAAAGAGCAT GTGGTCAGC CTGCTGTGG TCAGACTCGG AGGCCTGAA
16901 TTCAGATGGA GCATTTGGTG CTAGGGGCA GTCATGCOCA GTTTCCCTT
16951 AATAGCTAGT ATATCTCTGTC CCAGGAGTTA AAAGCTGTT GGAAGAGTGA
17001 ACOCTGATAT AAACCTCTGA CTTTGGGTAA TGATGATGAG TCAATGTGG
17051 TTCTATAGAG GTAAACAAATC CAACACTCTA GTGGGAGATG TTGATGGTGG
17101 AGGAGACTGT GCATGTGGGG GACGTGGGT ATTTGGGAAT GTTCTGGGT
17151 ATTTGGGAAC ACOCTGTACT TCOGCTCAA TTTTGGTGTG AAOCFAAAC
17201 TGCTCTGAAA ATAAAGTTTA TTAATTAAAA ACAACAAAC AAACAAACA
17251 ATGCTGTGTT GGGGTGAAG CACACTGCC AACTOCAAC AGCGCTGGGA
17301 GTTGGGOCAG TGGTGGGGAG TTGAGAGGAG GAGAGCTGG TGTGAGGTCT
17351 GAGGTCTGAA TGAAGTCCGT TCTACCTGTG ATCTGCTGTC TCCCTGCTCT
17401 CAAGTCTCT AATGAATAGA CTCGTCTCTC CTTGCTGCTG AGCTGCCCCA
17451 GCAGTTTGA TCATAGTCTA GCATTTGTTT TTAGAGCAGC ACTTCTCAA
17501 CTTTTATGTG CTTAAGACTC AOCAGGGAT CATGTTAAAA TTCAGATTCT
17551 GATTCAGGG GTCTGGGGTA GGAOCTGAGT CTOCAGCTGA TGCTCATGCT
17601 ACTGGTCCG ATGCTGTCA ATACTTGGAG AAGCCAGTT TTGGGCTTC
17651 GGAGTGCAT CCAGATTGCG GGTTTGAATC TGGGATTGTC TAAITAGTAA
17701 CTGTGAOCTC TGGCAAGTTA TTTAACTOCT CTATGCTGTC CTCGTGTTTG
17751 TTATCTGGGT CCGTCTGGG AGTTGTTATG AAAGGTTCA GCCAGGAAG
17801 GGGCTAGGA GGGAGATGAT GAAAATGGAG ATTCAGGCC CTAGAAGTGA
17851 TCTCTTCAAG ACOCCAGOC TOGACTCAGT TCACAAGTTA TTCAAGCTG
17901 ACCATTTACC CTTGAGGCCA GTACCCATTC AGCTAACAGT AAGTGTAGCA
17951 AAGAAAGGT TGCAAAATAA AAGAAACATT GAATCATGAC TGAGCAGTTC
18001 CTACATCCCT GCOCCATGG TGGGGTGGG GGGAGCCCTG CCACAGTAAG
18051 CTCCTGGGG CAGCTCAGT CCCCCACAAG CCCCCATGGC AACAGGACCT
18101 CCTCCCACT GTGTTATGTC TGCAGATAIT TTTAACAGCA ACACITTTTC
18151 AGTGTCTTTT GGAGAAAGAT TTGTTAGTTA AAATGTGGCA TATGTTGGG
18201 TGGTTTTTAA AGAATTGGAA ATAGCCACAA CATTGGGGT GTGGCTATCT
18251 CAGTCTTGA AGACATGAAA TATCAAGTAA AGGTTGTAG GTGTTTGGC

FIGURE 3F

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

18301 CTGTCTGTCT TTTACCGGTT TTTAAAGAAC AGCAATTAGG TTGTGTGCTG
18351 AAATGCAGTA AATGCTTTAT ACTOCTTTTC CCAGATCTTC CTGTCTATGG
18401 ACATGGGCTG GCGCTTGTGT GCGTTTCATGC CCTGTCTTTA CTCGTGGAATG
18451 GGCTGGGIGT CAGATTATTT TATTCCACGC ATOCATAGTC CCTCTGCTOC
18501 TGCTCTACAG CATGACACAG TTGTGCTTAG TTAAGCATT TTGTGPAATTG
18551 CTGGTTTAAA GCGTGTCTTC CCTCTTGGC TGGCAGCTCC AGGTTGGCAGG
18601 GCGGCTOCT CTCTCTTACA GGCACATCCA TGGCATGTAC AGOCTOGCT
18651 GCTCGGGGT AGCTGCGCAG TGGACATTGT CGAGCCAGTC AGAATGGCCA
18701 CAGGTAGTGG GGACAGATTG GAGCTOCTTT GOCTAAGAA TTGAGAAGGT
18751 GACTOCCAAG CAACCTCTGA ATATCAGGAA TCTTGATGTT GGTTTGTCTT
18801 GCGTCTCAAG CCGGTTCTIG CCACCTAGTG TGAFTTTGGG CAGGTTTCTT
18851 ATGGAGGCTC AGTTTCTCTT CCTGTCTAGT GGGGTTATTT ATATGTAAGT
18901 AGCTACCTTG CAGAGCTGGT GTGAGGGTTC AATACAGTAA TGCAOGTGA
18951 GCGCATGGAO GATGCGCGC ACAOGCAGC CTCACCTAAG TGTTAGTTGT
19001 TAGATTAGA TTGTATTAT CAGAATCTGA TGGGTTGGG TGGCTCACAG
19051 CTGTGGTCC AGCTCTCTAG GAGGCTGAGA CAGGAGATGG CTCAGACCA
19101 GGAATCCAG CCGAGCTGG GCAACATAGT GAGAOCCTGT CTCCTTAAAA
19151 AAAAAAGAAA TAATGAATCT GCTGTGCTA AATAGGCACT TAGAATGGCA
19201 CAGTCAATTC TCTCTTGTG TTCAGTGTCC TGTAAATTTT TTACAAATTT
19251 AAAAAAATGT OGATAGCAGT CTTATTCTGA TACAGCTTCC TCCATCCCTC
19301 CTGTGTCTGG CAGGTGCTTT GCTCTGGGC ACACATCAAA GCTGTCTCTT
19351 CTGTGGGTG GOCTAGAAGG ATTAGTCTTC CTTTGTCTCT CCTTTCTCTT
19401 AATTCCTTTC CCGGCTTTC TCCACCTGG GCTCTGTGTG TGGCTTCTCT
19451 GGAGAAGGCG AGACGCAAT GACTOCATGT CTAGGCAGAG GCGTGGGTG
19501 CTGCATCTCT TGOCTGTTC TTGGCTTGC TGTGTCTGGG GGGGGCAGGG
19551 TGGTGTGGG CATGGGTGG TGTGTGGCAT GGGGTGGGT TCTGGCTGAG
19601 GCAGGGCTCA GTGCGAGGC CAGGCAGAGC TGAGTGGCTC CACTTCTCTG
19651 AGATGGTTGT CAGCATCTTA CTTGTCTGTG TCCCGTTAAT TCCCATGCT
19701 GCTGTCTGTA GTCAOCTCC TAATGGAGCT GGTCTGTAGC TTCTGGGACA
19751 GCTGATTTTC AGGGGATTAT TTGTATTACA CACTTTAATG CTTTTTAATA
19801 GCAAAATTTT AATTAATGG AAAGTCTTT TGGGAAGCGG GGAGCAGCAG
19851 CTGCAGCAAG ACTCAGGCTG AGGCAOCCG TTAGACCAGA GGTGCGCAAG
19901 TGAGTGGGGG GGAGGCAATG GCAGGACTTC GAGAGGACTT GATTGAGTGT
19951 ATATGGAGTG TGCCAGGCT AATTTTATG GGAGGAAGG AGGGGCTGG
20001 CGCTGGCTTC TTCTCTCTGT OCTAAAAGC CCTCTGTCA TCTGCAGGC
20051 TAGGGAAGCA TCTTCTTTC CCAGGAGAGA ATGTATATTG GATATATACA
20101 TTATATCCAA TAATGGGAGG GATATTGGAA GTATCAOCTG CCTTTGATCC
20151 GGTTCOCCAG AATACTGAGA TTGGGATGGG ATTTTGGGG TTGAGTCACT
20201 AGATTAGATC AATAGTGTG GGTAAATGGG TGGGAAACA GTCTTGAGGC
20251 CTTGGCTOOG GCGTGGCAG GCTTGGAGT CCTCAGTCAT CAAGGAGGA
20301 GAACAAGGGG GCTATAGTGG TGGTTCAGTG CCTCGGACT GTGCGGCTG
20351 GGTGTATATC TTTGCTTCTT GAATGATCTT GCTTGTGGG GAGGGGACAT
20401 AGGGAAGCAC CTCAGGCTG AGGAAAGTG TGACACTGGA AATGGAAGCA
20451 GCGAGGGGCC ACCAGGAAG AGACATGGC ATTTCTTTGT CTCTAGCAC
20501 TGAAGTGGTT AGTTTGGTGT CAGGCAATTC CTGAAGTGT CCATGAGGTG
20551 CAOCTGTAA TGOCAAGGCT TGGAGCAAAG GTCAAAOOGA GGGAGGCTT
20601 TGGAACAGAA GTTCCCATC AAGAGAGTTC ACGTGGGGG AGGGACAGGA
20651 CAGTCAGCCA AAGGGAGTC GTTCTGTGAT TAGAATGATG CTCAGGGGTT
20701 GGCATTTAAC CCAGAGGTGG CTTTGTGGG AGAACTTGA AGAGGAGAC
20751 TCAGAGACT TCAGGTTGGT TTTTACCCA AGAGCTTTGG AGGCGGGAG
20801 CAGGGAGGGA TTCCGCTGC CAGCTTTTTC TGGCAGCTGG TGCACTGGC
20851 GAGTCTTCTT CCAGTGGCAC CCTCCCGAC CTGTCTGGA TGCTGCTTTA
20901 GGGACATTTG TAAGTGGTCT TTCTTTTGA TGCCAGGGCT TTGTGCTG
20951 AATATGGGG CTGCCCCACA TTTCTTAAGG GAAGCAGTGG TGTAGACCAC
21001 AGTCTTTTGA GTCAGGTAGC ACTGGATTCA CATCTTGAOC CAOCATTAG
21051 AAGCTCTTTG GCTTTGTTA AGAGACTTTG TGTCOCTGAG CCTCTGGTGC
21101 CCTCATCTGT AGAATGGGAA TAACATTCT CTCAGGTGGT CGAAAGGAAT
21151 AATAAACTCC TCAAAGGCAG GCACTCTGTC TGTCTOCTCT GAATCCOCT
21201 GOCTAGGCTG GGGTCCAGCA CATAGTAGGT GCTTGATAAA TGCTTGCAGA
21251 ATCAGTAAATG TATGCAAGAG CCTAGCACAA GGOCTGGCAT AGTAAGCACT
21301 TAATAAGCTG TTATTGTGT CATTGGCTGA ATGTGTGGT GGOCTTCCAG

FIGURE 3G

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

21351 GCTCAACATC CATTATCTCG CACCAAGTGC CTTCCTGCTG AGCTCTGCTT
21401 TTCCACCTTC TTCCCAACCC CTTAGTTCCTG CTCCCATTTA CTGCTCTGGA
21451 AGAGCTCTCT GGCCTTTCCA TCTGGTCATT GTTGTCCTCT GCGTCACAA
21501 TTGCTAGGTG CTGCTCAAGC TGCATCTCAC CATGCTGCAT CATATCCAG
21551 GAACACCTTC TGGGAGACCA GCGCTCTGGG AAGGTTCCGG CTCTCTCTCA
21601 TCTTGACTTC TTAGCCATGA AGCTTTTCTC TCTTGCTGTA GTCTGAGGTG
21651 GCAACAGAG OGOCAGGCTC TGGCTCCAG GCTGCATAGC CTGCACTGG
21701 GGGGCACTGG GCAAGTGGC ACTTCCCCC ACTGCTCTCT CTGAGAGGC
21751 CTGTGAGGCC GACAGGATGG GGCAGGGGTG GGGCTGCTGA GGAGAAGCT
21801 AGGATTTCCA AGTTTCTCT CTGTAACTCT CTGTCCCAT CTCTCTCTT
21851 GCAGTGGGC TCCATGACAG TATTCTCTGA GAAGGTTTC ACTAOCCTCT
21901 GTTTGAOCTG TAAGTGCAC TTTCTGAGGG TGTGGGGGC TTTCCTCTA
21951 GCTGACTCAA AATGAAGGCT CAGGAAGGG OCTAAACAG CTCTCCAGC
22001 TCCGCCAGG GCGCCCTCT TTGTCCAGG GAAAGGATTT GACTGGGGCA
22051 GATTGCTGCC CCAACCAAG GGTCTCCAT GTTCCCCAG CTTCCCCCA
22101 GGGCTCTGAA CCGCAGGACA GCATCTCTCT GCACTTCTG TTCAGCAGCA
22151 CGCTTGCAT AGATGCTTT GTCTGTGTTT TCAGTGTGCT GTCTTAGTG
22201 AAGAAATAAA AGACAGCTCT TTGCATGACC TTAATAATC TGAGAAATCA
22251 GAGGTAGCTT TCATTAGTGG GAAACAGGC TCATTGGAT TGGGTCTCTC
22301 CTCAAGTTG GTTGTGGTTT AATGTCTTAA AAGTGGCTCT TACCTCTGG
22351 ACATCTCTCT CCAGGATCT CAGGGTTGG TCTCTGTGTC ATTGTCTCA
22401 TTACTCTTCA ACTTCAGTAG TAGCTCTGTC CTCTCTGGG AGCATATTT
22451 TAGTGTATT GTTGGTCTCA AAGCTGTGAC TTTTGGGGTA GGTGACTGT
22501 TTTCTCTTAG ATCCCTGTAT CTTCATCTCT GCTGACTAT TAGTGAATCT
22551 GTGCATTTTG GAAAAAGAAA TGTCCGGAAG GAAGGCAAG CCAATGATAC
22601 CTCAAGGAGA ATCCGGGTGT CACTGAAGGA TCGAGTGTGT TCTGAGCTCT
22651 CAGATGAAAT GCATGGGGAG TTGGGATTTT TCTGAAAGC ATTCTACAGG
22701 GTGAOCCGT TCTCTCTGG ACATTTGGGT TGGACAAAG ACCCTTCTG
22751 OCTCTGAACC TCTCTCTCC GTTGGTTGCA GTTTPAOCG CGGGAGCTG
22801 TTTGAAGACA TTGTGGCCAG AGAGTACTAC AGTGAAGCAG ATGCCAGGTA
22851 GGATGAGGC CCGAGGTTT AAATGTAGCT CTGGAGTTTA GCACTGAAG
22901 AAGTCTTGG CACCTTGGG GTCCAGCATT GTACCTGTTT GAATAGTCTT
22951 TGGGGAAGAT CAGAAATAGCT CTGTCTGGA GAAAGATTCT GTTGAAGCTG
23001 GCTAGGGCTT GCATCTGTG GGTGATATTA GAAGTTAAA ATTGAGCACT
23051 TCTTAACAG GCGCAGTGG TCACTGCTGT AATCCAGCA CTTTGGGAGG
23101 CTGAGGCAGT TGGATCACT GAGGTGAGAA GTTGGAGCC AGCTGGCCA
23151 ACATAGTGAA ACCCTGTCT TACTAAAAAT ACAAAAAAT TAGCCGGGTG
23201 TGGTGGTGT TGGCTGTAT CCGAGTACT TAGGGGCTG AGGCAGGAGA
23251 ATCACTTAAA CCTGTAGCG AAGGTTGCG TGAGCCAAGA TCACTGCACT
23301 GCACTCCAGC CTGGTTAACA GAGGAGACT ATGTCCCTT CCCCCCCC
23351 CACAAAAAA ATCACTTCCA AATGAATGTT TTACAAAGCT TTTCAGGTC
23401 TCTTTTACC GTTGAOCCA GAAATACTTT TTTTGTGAC TACCATGTAC
23451 TGGCAOACT GCGCAATGTC CCGCTCTGC CTCTCTCTT CTCTGACAA
23501 TTCTGGTGT CTCAAGCCAC TGTGCTGAG CTCTGGCATG ATCCAGAGGT
23551 GCAGAAGACA TGGTTTCTGT CCTGAGGGAG TGGAGAGTT TGGGCTGATA
23601 ATCCAACCAT AGAGCCCGG GAGCTTTCAG CCTCTGTAC CTGTCTCTA
23651 GAACACCAT ACCAGCTGT CCGTGGGCT OCTCCACTT GAGGACCGTT
23701 CCGGGCCAC ATGCTCAGC CTCTGCTCT OCTGGAATC CTGGTCTCT
23751 OCTCAOCCAC GCTCTCAGGT GCTGTCTCAG CTGCTCTTC CCGCTTGGC
23801 TCTTCCOCCA GCTTGTCTT TCTGAGGGT GATGTCTCT CAACCTGGTT
23851 TTGATCATCT TGGCTGAGC TTATCTGGCT TATGTGGCAG CTCTGGCTG
23901 TTCTGGAGAG TGGGGGAGT CAGCTTCTCT ACGAATTTCT CAACCTGAG
23951 AGGCCAATGT TTGCTGATCA ACTTCAGATG CTTCAGCTC GGAAGAATT
24001 CTCAAGTGG GAGATGAAT OCAGTCCAG CAGGGGAGGA CAGGCTCTG
24051 GGAAGGAGGA GCGATGATG GCTCAGGGAG OCTGGGGGA GAGGGAGAG
24101 CTATAGGGAG GGGGCCCTGA GGGGGGTGA CTGTACAGT GGGCTTGGC
24151 TGGCTCTGCT GGGACACTTC GCATTTTTC CATTTTTCG CAGAAGGCG
24201 TCCCTGCTAG CCGGCTCTG TTCTAATAT ACATCTCTGT GGAGACTGC
24251 CTCTATAGCT CAGTCTTAAA GTTCTGTGG CCACTCTCTG GGTGTGTCT
24301 TATGGGGAG CCGAGTTTC AGCCCCAGG GAACAGTAC GAACCTTGG
24351 TTCTGTGGC ATCCCCAGCA TCAGATTTTA GGAATAGTAA GTCCAGGCA

FIGURE 3H

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

24401 CCCAGOOCCA TACACTGGGA TGCTCTGCAG ATGTGCTTAA TATACCAGAT
 24451 AGTGCCTGAT GACGGGGGTC TATATTCTAG GCCAAGTTCC TCAGCCTTGG
 24501 TGCTACTAAC GTTTTAGGOC AGGTACTTCC TTGTTGTGAG GCTCTCTCTG
 24551 TGCAATTGTG CAGACATTTA GAAGCATCCT TGGCCTCTGC CCACCAAAATG
 24601 CTGGGAGCAC CCTCTCTCCA GTTGTGACAA CCAGAAATTT CTCTAGGCAT
 24651 TGCCAAATGT CCOCTGOGGT GGGGGGGGGC GGGGGGCAAA TTCAITTOCA
 24701 GTTGA AAAACC ACTGCTCTAG ACTGCCCCG CTCTCTGTCA GGAGTTTGAT
 24751 GACAGGGATG GCAGGATGGT TTGCTATGTG GACAGTCTGA TTTAOGTGTG
 24801 TGACTGTGGC TGGGCGCAGT GGCTCACGCC TGTAAATCCA ACACTGAGAG
 24851 GCAAGGTGG GTGGATCACT TGAGCTCAGG AGTTCAAGAC CAGCCTGGGC
 24901 AACATGGTGA GACCTTGTCT CCACAAAAA ATACAAAAAT TAGCTGGGCA
 24951 CGGTGGCTCA TGCTTGTGGT CCGAGCTACT GGGGAGGCTG AAGTGGGAGG
 25001 ATTGCTTTAG CCGAGGAGGT CAAGGCTGGG GTGAGCTGTG TTCAOGACAT
 25051 TGCACTCTAA CCCAGGCAAC AGAGTGAGAC CCTGTCTCAA AATATAAATA
 25101 ATAAAAATAC TTTGGGTTT TTTCTCTACG CAAAAATCAT AGAAGTGCTC
 25151 CTTAAATGCC CTGTTTGGAA GCTCTTAAGT ACATTGTTTC TTAAAGGTAT
 25201 CTTTGTACTT GTTTTAGCTG CCTTACTGGA TGOCAGACT CAGGGCAGCT
 25251 ATTGGGTCTT GTGCATCTTC ATTATCTAG GCACCTAATA AACATTTAGG
 25301 GAAATGAATG AGTGCACCCA CCGCCAAAGT AGCTTAGGTT GTTTAGTTGG
 25351 ACTCTCTCTC CTAAGTTGOC AGCACAAGCT TCTTCTCCAA GAACAAAGTT
 25401 ACTGTATGGA GAAAGAGAAA GAAGGAAGGG ATTGGATGCT CTCTCTCTCC
 25451 TCAGGATTTCT GGGCTGTCTC CTGATCTCTT GGAATGAGT TGGTTGTGTT
 25501 AGAOCCTTCC AGTCAAAAGG GGGTGAGAGG AACCCGTTCT AGCGGTGATC
 25551 CTAGAAAAAC CATGCACTCT GCTGGGCTT CCGTTTCTCT TTTCTTTTAA
 25601 TAGGTTGAAC AAGATGATGT GCAGAGTCTA AGGTTCCAGT GGCCTTTAAG
 25651 TGATTCTCTG TGAATGCTG GCGCTTGTG ACATGCTTFA GTCTGCAGCA
 25701 TGTGGTTGTG GATGTGGATG AGGTGGTTTA AOCCTGCGCT AACATTCTTT
 25751 TTCTCTCTGC TTTTMTAGOC ACTGTATACA TCAGATTCTG GAGAGTGTTA
 25801 ACCACATCCA CCAGCATGAC ATCTGTCACA GGAOCCTGAA GGTACTAOC
 25851 AGGCTCCTCT CCGTCTCTCT GCTCATGAAG TGTGCGGOC ACCTGGTGCC
 25901 AGATAGTGGT ACTGCGTAGG CCGCAACTAG GCTTCTCTCT GGCCTCAGGG
 25951 TGGGTGCTCA CAAGGTTCTC TGTGTTTCTT CTGCAGCCTG AGAACCTGCT
 26001 GCTGGGAGT AAATGCAAGG GTGCGGCGT CAAGCTGGCT GATTTTGGOC
 26051 TAGOCATGGA AGTACAGGGA GAGCAGCAGG CTTGGTTTGG TAAGGGTGAT
 26101 CCTGTCTTCC CGGAATGCAG CCGCGGCTT TCTCTCTCTT CCTGATCTGC
 26151 CTTCTCTCTT TAGAACTAGA AGOCAGACCC TTAATGGTCC TGGCTTCCGA
 26201 GATCTCTCTT GCGGTATGCG GACTCAGTAC AGTAAGTCTA GCTGTGTGCA
 26251 GCACTGCTTT CTGTCTGCTT GTGGGAAGGA GCTGGAGTTC CTGGTAGGCA
 26301 TAGCGCTTTG CCGTCTGGTT CAGATTCCAG GCGCTACAAG AAGGCCAGOC
 26351 TGTGAGCTCT TGCTGOCAT GTGCTGAGAG TTTATGTAGC AAAAGCAGCA
 26401 GGAATAAGAT GGGACTTGGG GGAAATGGCT GGTGTGGATT TAACGAGAGA
 26451 GAAAGTGGGT TCAGTATGCC TCTGCTCTCT CTTTGTCTAC AGGTTTGTCT
 26501 GGCACCCGAG GTTACTTTGT CCGTGAGGTC TTGAGGAAAG ATCCTATATG
 26551 AAAAOCCTGT GATATCTGGG CCTGCGTTAA GOCATTOCA CGCTCTCAGC
 26601 TTTTCCGCTG TAAGGGCCTT CAACCTCCGA TGATGGCAAG AAAGAGGCAT
 26651 CGCTATTTCT TGCAAGTCC ACACGTGCTT GGTGTATGTG AAATTATGGT
 26701 GTTTGCCCCC GGGATGGCTG TTCCCATCAC ACCCTCTCT CTGGTACTTT
 26751 CTGGGATGAC ATTGTATCTT TCTTGAGAG GGTATTGCTT ACGCTTATGA
 26801 GGATGGGTTG TGCTAAAGA AATCCTGGT GTGACTTGGT GACGTGAAGT
 26851 GTGAGGCATA GCAGGAGGGG CTGGTAGCAT AGCATTTATG GCTGGCATCC
 26901 ACTTCTGACT CTGGTATGGC CCGTCTCTTT CTAGGTGGCT CTGAGCCTCT
 26951 CATGGTTTCT CTTGGTTCTT CAGGGAAGTA GCGGACTGAC CCGCATGAOC
 27001 TGTGTGTCTT GTCTGTAGG GGTCTCTCTT TATATCTCTT TGGTGGGCTA
 27051 TCTCTCTCTT TGGGATGAGG ATCAGCACA GCTGTATCAG CAGATCAAGG
 27101 CTGGAGCTTA TGAATGAAG ACCAGAGAGC GGGGAGGCA GGCAGGAAG
 27151 GGCAGATGTC CTCTCTCTG GGTCTCTCTT AAGGAGCAG GCTTGTTTAG
 27201 TGTGTCAAGT GATACGGGGG TGTAGGGGA CTTTGAAGAC CCAGGAATGG
 27251 GCATCCAGGG CCAATTTCTT GCGCTCTAT GTCCAGGGA GCAACTTTCT
 27301 TTTGCACAGC CTTCTTCTA ACTAAAAATG AGGAGTCCAC TGAAGTCTTT
 27351 TGATCTTTAC TTGCAAGAA TGGAGCGGC TCATTGGTGT GCTGTGTAC
 27401 ACAGGGACAA AAGGCTGGA GACTCCTCT ACTGCACTGG CACCTTGGAC

FIGURE 31

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

27451 ACATTGCTGA GCGCTGTGTC OCTCTAAGT ATAGAGCTGG GCTTAAACCA
27501 GAGAAATGTTG GAGTCCCTTT CCGCTCTTAA TCTGATGTTT TGGCAATCTTA
27551 AACATGACTG TTCTGTCTGT CTTTCCAAGT CTTTAAGTTG ACACAGGTTT
27601 TGGAAATAGC GCAGGGCTTC TOCAACTCTG CCAGTCACAG CTTTAGGTAC
27651 CACAGAGTAT CCCAATTACA GGAGTTGAGT TGAAGACAGA AOCAGTGTG
27701 CAGGATATGA AGCTCAACAA TAOCACATTC TTCTOCTAT TOCTGTCTCT
27751 TAGTTTCCAT CACCAGAAAT GGACAAGGTA ACTOCTGAAG CCAAGAACTT
27801 GATCAACCAG ATGCTGAACA TAAACCCAGC AAAGGCAATC AOGGCTGAOC
27851 AGGCTCTCAA GCACCCGTGG GTCTGTGTAA GTGTCTTTGC TAGTGGCCAA
27901 GGAGCTCAGG GGTGTCCAGC TTCTGTGTGC OCTGGCAOC AOOOCTOCT
27951 TCTTACCAGC AGAGATTCTT TCTGGGCCCC AAGCAATAAC TGAGCAGGCG
28001 GGCAGAGTAT TGTTGAGGCG CAGGGTCAAT AAATGTACAC AGGGAGACTC
28051 GGGAGGCTGA TGGGGCTGGT GGGGCACTGC TOCTCTCTCC CCCACTCATG
28101 GCTGTCCAGC TGGGATTTGT TCTGTCTCTG GATGAGGGCT CAGGTTGAOC
28151 CTTGTGGACT CCAGGTAGOC GGTGATAGAA AGCAGCTGGC AAAAOCACAA
28201 GTGAATTCCC AAGCTGGGGT TCATACTCAG ATCTCAACTC CACTGGAGTG
28251 GTGAACAGA TCCAACAAAT CAACAGAAGG GGTTCCTGAG TCATTTAAAG
28301 CATAAAGCT GAGGCATAAA GCTTCTGGCC TAAAGTCTTA GGAGAGTCTT
28351 CTAGGCTATC AGTGTGGGTT GAOGTACTCT GTTTTATATC ACAATCTTTT
28401 CAAGCTGAAA TATCAACTTT CAGACAAAGA AGAGGATTTC GTAGAGTTAG
28451 GCATCTTGAC AACCAAGAGC CATTATTTAT CTGTCCATTC TGTGTTTAT
28501 AAATACCTCT TTGGTGTCTG TTACCGTCTG GGTGCTGGAG ATACAAAGAT
28551 GAATGAGGCA TGGTCCCTGC CCAAAAGAT CATCTAGGGA GACAGGCACT
28601 CAAACAGGCA GTCATGTTAC AATGTGACAA GTAGGTACAA GAATCTAATG
28651 AGAGTACAGG AGCTOCTACT GTTCTGGTGG GGTGGTGGGG TTACTGAAGG
28701 CTGCAAGGAG GAGGTGACAC CCTGTGCTTT GTTCTTGGCA AATAAGGAGG
28751 TOCTCAGAAC GTTAACTGTC AGACAGAGTT TAGCACAGTG AGAGGTTATG
28801 GGAACCTATG GTGAGTTGAA GGAATGTTGA GTTGTTTGGT TGTGATGAG
28851 GCTGCAATA TCAGAAATGA AGAGAATGGG GCAAAAGATT CCTGACATA
28901 CAAGTTTCTG CCTCAGGAGT TTGGATTTTA TTCTGAAAC ATAGGGAATC
28951 ATTTAAGGTT TTTAAAGAAG AATGAAATTT GCATTTAAGA ACATTTTGA
29001 AGTTGTGAGG AAATGAATTG CCAGGCATGG TGGCATGTGC CTGTAGTCTC
29051 AGCTGCTGGG GATGCTGAGG CAGGAGGATC ATAAGCCAG GAGTTTGAGG
29101 CTGCAAGGAG CTATGATGTC AOCGTGAAT AGTCATTGTA CTCAGGCTG
29151 GGAAGATGG TCAGACCCCA CCTCTTTAAA AAAAAAAGAG AAAAAAGAG
29201 GGAATTTGAA ATTTTTTAAA GAAAAGGCTT GGAGACAGAG AGCTCAGGAA
29251 GCTTTTITTA TAGTTGGAAT AGTCTAAGCA AGAOCAGGTC AGGCTCTCAGC
29301 AGAGGGTAAG GATGGGGGAA TGTGCAAGTGT GTTGAAATTC AAGAGATATT
29351 TGAGAGAACC TAAAGGATTT AATCTCTCTC AGTTGGATTT GGGGGGAGCA
29401 AAGAGAGAG AGGCCAGGTT TCAAGTTGAG CGGAGAGTTG TAOCCTCACT
29451 GACCCAGAG AAAAOCAGAG GAGGAGCTTG TTTGTGAGAC AAGACGATGG
29501 TTTTCTCTTT TTTTITTTIT TTTTGAGATG GAGTCTCGCT CTGTGCCCCA
29551 GGTGAGGAGT CAGTGGGCGG GTCTCACTGC AAGCTCTGCC TCCGGGTTTC
29601 ATGCCATTTCT OCTGCCCTAG OCTCCGAGT AGCTGGGACT ACAGGTGOC
29651 GCAACACGC CCGCTAATTT TTTTGTATTT TTAGTAGAGA TGGGGTTTCA
29701 CCGTGTAGT CAGGATGGTT TOGATCTOCT GATCTCATGA TOCACCCGCC
29751 TOGGCTTOCC AAAGTGCTGA GATTACAGGC ATGAGCCACT GCGCCCGGCC
29801 AAGATGATGG TTTTCAITTT GTGCTGCTG AGTCTGGCAA OCTOCAGCCA
29851 GACACATPCA GTGGGTGGTT AGAAATATGG TOCTAGAGAT TAGAAAAGAA
29901 GCTAAAAATT GGAATCCAC ATTGTAGTCA TTTCTGTGTA GTTGTAGTG
29951 AGGCTGTAGA AATAGCCTCT TOCTATGCTG TAGATGGGCC TGTTOCTATG
30001 CTGGTTGAGT TCTTAAGGTC AGCTTCTATT GGCTGTAGTA GAGAAGAGAC
30051 GGCCTACTACA CACCAGCAAT TAATGATAGG GAGAGTTAGG GGGCCAGCA
30101 AAGAGACTG AGAGTGAGAC CTTCAGAGAG AOCAGAGAG TAAGAAACAG
30151 GGGTCTCAG TAAGGGAGCG TCAGGAATCA GATGAGAGG AGTCCCTGAT
30201 TAAGTTGGGG AAGAATCCC TGGCTCTGAC CATTAGATGC CATTTGTTCA
30251 TCATTTTCACT GAGACAGTGG AGAGAAAGAT GAAOCCCTGT TTTTCACTGAG
30301 ACGAAAAGGG AGTGAGGGTG AGGAGGGGCA TGGGGAGCTA GGCATTTAGG
30351 TGGGAAATAA ATGGTGATAC TTAGATTAG ATGGGOCAGG GGAGCTTTTA
30401 ATGTAAAGCT CACACCTGTA ATCCAGCAC TTTGGGAGAC CAAGGCAGGC
30451 GATCACTTGA GGCCACGAGT TCAAGACCAG OCTGGCCAAC ATAGTGAAC

FIGURE 3J

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

30501 TCCATCTCTA CTAAAAATAC AAAAAATAG CTGGGTATGT TGGTACACAC
30551 CTATAATTOC AGCTACTTGG GAGGCTGAGG CATGAGAATC ACTAGAAOCC
30601 AGGAGGTGGA GGTTCAGTGG AGCCAAGATA ATGACACTGC ATTTCAGGCT
30651 GGGTGACAGA GGGAGACTCT GCTCTTAAAG AAGAAAAAAT TTCTTTTAA
30701 AGATTATATT GGTCAAGAGC GGTGGCTCAC AACTGTAGTC CCAGCACATT
30751 GGGAGACCAG GGTAGGTAGA TCACTTGAGC CCGGAAGTTT GAGACCAGOC
30801 TGGGCAACAT GGCAAAOCC CATCTCTACA AAAAAAATA CTTTAAAAAT
30851 TAGCTGGTGG TGGTAAOCTG OCTTAGCTAC TTGGGAGGCT GAGATGAGAG
30901 GATCAOCTGA GCTTAGAGAG GTGGAGGTGG CAGTAAGOCA TTATTGTGCT
30951 ACTGCACTOC AGOCTGGGCA ACAGAGTGAG ATGCTGTTC AAAAAAATA
31001 AAAAAATTTT TTGTTTAAAG AGAGGCTTAA CTATAATCTA TAGAGAAGAA
31051 TCTAGTCCAG AGGAAAGAGT TGAAGATCCT TGCTAATTGA GGAAGCAAG
31101 GTTTGGACAG CAGAAAAAGA GAGGGGGCTC CTGAGOCAAG GGCAGGGGGT
31151 CCATCCOOGG GATGAOCTAG ATCCOCTGA GACTTCTATT AGTGTGGAGG
31201 CAGGTGAAGA TOGGCTTGTG AGTGAAGTTC TGAGCTGAAA GGGGTCTCTG
31251 CTGATGAOCT CTCATTTTTC TTTTGGAGAA ATTTACAOOG AGGAGGAGGT
31301 AAAATGAGAG ACTTGGGGAA GGTAGAGAAG GTGGGAGAG TTGCTTCOOG
31351 AACTGGAAAG AGTGGGCCAA GGTGAGGGA AAGGATGOGA GGAGGCOOOG
31401 TAGGTGTGGT GGGCAOCTGG CTGCAGGTGC CAGGATTGTG TTTTCTGACA
31451 GGTGTGTGAA GACAGCAACA GCAAGGGGAG AGGGCAAGCA AACTGAAACA
31501 GGCACCAAG AATGGGGGAA ATATTCTGTG CTGGGGTCAT TTTTGCAGGC
31551 OCTACCTCTC GCAGTCCOGT GTGTCTGAG CCOCTGAGGA CATCACTATA
31601 TTTCTGAAAT ACATAATGAT GCTGGTATTG ACAGCTGAGT CATTGAGGAA
31651 GTGTAGACTG TGTOCCATGG ACTCTGTCTA AGGAGGOCAG GAAGTTAGCA
31701 GTAAATACAT TGAAGACAAA TTTCCATCCA AAAAAGGGGG GGCACAGTGG
31751 CTCACAOCTG TTATCCOAGG ACTCTGGGAG GCGAAGTGA GCAGATCACT
31801 TGAGGTGAGG AGTTGAGAC CACAGGCTG GCAACATGG CCAACCTGT
31851 CTCTACTAAA AATACAAAAA TTAGCTGGGT GTGGTGGGAT GTGCTGTAG
31901 TCCAGCTAC TOGGGAGGOC AAGACAGGAG AAOCTGAGAG GCGAGGCTA
31951 CGGTGAGGOC AGATTGCAOC ACTGCACTOC AGOCTGACTG ACAAAGGAG
32001 ACTOCTATGC AAAAAAATA AAAAAATACA TCCAGAAATG TGAAGAAGAT
32051 TGATGCTTCA AGGTGACGAT OCTTAGCTTC TGGGATCATG GCTTCAITCA
32101 GGAOCTTGCT GGGGGTGTGT GGAGAGGGGC TCTTGAAGG AAGGAATGTC
32151 CTCTGTAGAG AGCAGGAOCC CTGCGTTCT CTGCTGCTG AGCATCTGGA
32201 ACGCAGTAGG TGCTCAGTAA ACAGCTGCTT AAGGAGTGAC TGAATGAGGA
32251 TCACAGOCC CAGGTACTC TOCTGTGGG TAGOCTCTGT TTCCCAAGGA
32301 AGAATAGGAG GGTCTCTCAG CAGCCOCTCT AGCATOCTGT ATGGTGTCT
32351 CAGGTTCATG TTGTCTTAT TTGCTTAT GTAAOCTTGA GTTGGGGTGA GTGCTTTTAT
32401 TCTAAAAGOG TTTTCACATC TGTGAOCTCA TTTTCATCTC AGAGCACTC
32451 TGGGGTGGCT GAGTGCAATG CCGTGTCTG GGCATGGTAT CGGTGOCAGG
32501 ACTGTGGGAG GGCAGAGGA TCTGGGCTGG GGTCTATAGC CTGTCTGTCT
32551 GGTTCCTAGC AAGCATOCC GGTGGCATOC ATGATGCATC GTGAGGAGC
32601 TGTGGAGTGT TTGGGCAAGT TCAATGCOOG GAGAAACTG AAGGTGAGTG
32651 TGTCTTCTAG GCTGCCAGOC TOCTTGACAT CATGCTTGC ACCAGTGGG
32701 CTCTGCCCC ATTTTCAAGG GAAGCTOCC TOCTGGCTGG AGCTGGGCTC
32751 TGAAGGTGT ACATGTACA GGGAGGGGG CCGAGAGGOC TGATGTCTTC
32801 AGGCTCTAGC CAGGAOCTGC CTTTGOCTGA GACAGGCTG CCTTTTCTA
32851 GGTCTCAGT GAATTCACAG GAOCTTCTC TTTTCCOAGG GTGCCATCCT
32901 CAGCACCATG CTTGTCTCCA GGAACCTCTC AGGTATGTTT TCCAGCTGT
32951 GTACTTTTAT TATGCOAGG TGAGTGGATC AGGAATGGG TGTGOCATC
33001 CCGGGCACOG CTGGGTTCOC TOGGGTCTC GGGGCACAC TTGACAGGG
33051 CGAGTGAGGA TOCTGTCTTG AGGGGCTGCT GCTGCTGCTG AGTCTGCTC
33101 CTGAGATTCA GGGGGCTGGA CTCACATTG TGAATTGTTT OCTAGAACTT
33151 CCAAGGAGT AGOCTGCOCA ACTTGCTATG TAOCTTGTTT CTCTGGAATC
33201 TTAATTTAACT CTCGAAGAC TCTCAGCACT TTACAGATTT TAGOCTTCT
33251 AGGATCTTGG AGGATGTGCT GGGGAAGAA AAGAGAGATG AGGTACAGTG
33301 AGTCTTCTCA ATTGCCAAT TTGCCAATT CAATTGCTG CTGGGACGAT
33351 CTCCTACTTC ATTTTGTCCA AGTGAGATG ACTAATAGAA ATTAATOCAG
33401 ATGTTTAAAC CTTTGTGGC GACTGTGCT TAAAAATGTC OCTGAGATAC
33451 TAGCTATAAC AGTGAAGAAA TAAAGACCAG CAGGAGAGAG GGAAGGAAC
33501 TTGCTTAAAT TTGCATAAAG AATTGGGAGA GGTGGGAOCA ATAATTGTA

FIGURE 3K

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

33551 AATCATACTT GACATTTATT TTTAAGATGC AAGACACTOC ACTOCCCTCT
33601 TGCCCCCACC CTCACCCCAA OCOCTATTAT TGTTTGOCIT CAATTGGGAA
33651 GCACAGTGGC TTTTITGTGA GGAAGAGATT AATGTGAGA CTGAAGACAG
33701 AGAGGGCTCT GGCAGCTTGG CCATCTOOC CGTCTOOC TOOCTCTAAC
33751 CCOCTTGCTC ACTGTTTGG TTCAAGACC CCOCTTCTOC TTOCCATAAT
33801 AAGACTOOC CCOCTTGCTC CCOCTTGCCAC CAOCATGGAA AGGGGGTGT
33851 GTGGAGOCCT AAGCCACCAC TCAGTGGGAG CCATTTCTGA ATACCGTTC
33901 TGCTGGGCTC GCTGCGCTG GCTCCAGGTA ACGCCAGGGC CTGGCTGTG
33951 AGGATGCTGC AGGCAGGGAG CCTAGGGCTT CGTGGGTAG CCTGAGAGOC
34001 ATGGAGCTOC GGAAGGCCAG GCGTGATAG TGAGCCCGG GCTGGTGGTG
34051 CCOCTGOCCTA GCOCTTCTOC TTTGACCCG GTTTGGGGCT TGATCTGTG
34101 TCATGGGTAC CCAAGAGGG CATACTGTGG TGTGGCTCCA CCTCTGCGAG
34151 ATGGGAACAG GGAAGGTGG CTGGCTGCT CCGGTGGAGT TGCAACTGTA
34201 GTCCACACT TGCTTCTGT GCTTTAATGA CGCAGCTTCT ACTTTTGGG
34251 TCTAGGAGOC TTTCCAGAG ACATTTGAAG GCGTTTGGT GTTGGCCCTA
34301 GAGCGAAGCT CTGCTCTCTC TCOOCTCTGA GTTGAAGAAA TGTGAAGACA
34351 GTCTGCTGCT TCTCTTTTAG CCAGCCAGT CAATAGCAAG GCGCTGTCT
34401 TGCAAGCCCG GGCCTCCACA TCAGCCTOOC CCTCCATTT AGGAACTGG
34451 CATCTGGTTC TCAGGAAATC GGGTGTAGG ACAAGCATT TTATTCATCC
34501 CTGTAGAGOC TCTGTCTCT ATTGGCCAGA CCTAGACTGG CCTTTGAGCT
34551 CACTTTGOCCT TGGGTGAGAG GAGACAAACA ATGTTGCAAG CATTCCAGGA
34601 TGGCCTCTTC TGCCCTGACT CTGGGACAGG TGAGGACAGA GTCTGTCCG
34651 AAGCTTCTGC AGAAGAGGT GTCTATGAT GCAATCAAGA AGGAAGGGCA
34701 CCTGTGTGTT TCTCTAGGGC TGTTTTGTGA GTTGACCTOC AATAGGAGAT
34751 GTGGCTTATC CTGGACTCTA GCAGTTTGGC TAACAGOGAA TGGGGGCTC
34801 CAGAGTGTAT TGCTTCAGCA GOCCTTGTCT TCTTTCTCAG GGTTTATTTT
34851 TTGGGCAOCT TTCAOCTCAG CACTGTGTA CACACAGACT GAGAATGCTG
34901 CCTCTCTGG CTACCTOOC TAAGACAGGG AOCCTGTCT CTGAGGGTTC
34951 GGGGGGCATG GAGCTGGGC CCACAGTAA ACTTAGCTGC ACAAGGGCA
35001 CAGACCTOC CTGGGAOCC CAOGCCAGTC CCTCTAGTGT GTGGATGTA
35051 GAGAGGGGAG AGGCTGCTC TGCGCCCGG GCCTCTCAT CGTGGGCTCA
35101 TTTAGCTTCT AGGGAGGAA GGACTAGAAG GGAGGGGTTC TCATCACAGC
35151 CTTAAGCTAG GCGGGGCTA CCTCAGAAG GGCACCTGCC TCTCAOCCG
35201 TCAGGCATTT CGCTGTGAC CTOCTOCCG AGGGGTCTAT GAGACAGGA
35251 CTGCAOCCCT CTCATCTGG TGGGACGCA GTGTTCCCTA TGCCCTGGOC
35301 CAGCCCGCTC TTTCCAGGC CCAGACTGC TGCCGGGCTG GCTGGGCTA
35351 CTOCTCAG CTGCCCTGG CGCTOCCCTC CCGAGCTCG GCTGGCTTGG
35401 CCAOCCCGC TGGGCTGCG CTGCGCTGG GGCATGCTCG CTGCTGAGG
35451 CCGGTGGCT TTTGGGGCT CTGTGACTG AGAGACTGTA TCOOCTCAGT
35501 TGGCAGGCAG AGCTOCCGC CCGCTCGOC TGCCCGAGC GCGCCCGGC
35551 TGGCCCGCA AGGTAGGTGG CATGAGTCT CCGGACCGC CTGCTOCCG
35601 CCOCTGOCAC CCAACCAGGA GGGCCAGCAT GCGGGGCCA CTCACCAGG
35651 AGGCGAGTCC CATGCTTGG GCGTGAATG GGCATGOCAG ACAGACTAOC
35701 TAACTTGGCA TCTGCAAGG CATGTTGTT ATGGAGCCC CTAACCAGOC
35751 ATGCATGCTG GCGCTTGGC AACTTTGAG GGGCAGTAG CTGGGGCAT
35801 GGAGCTGGGC AGCGGGAGOC TTGCCAAGAG CCGATGOC TGGGAGGCT
35851 GCAGCCAACA GTGGGOCCTC AGAGACAGTG CTGGGCATG CCGTGAAGT
35901 CCGGTGCTA GGAAGATT TCCGAGCAC TGTTTAAGAC CCAAGAGG
35951 AGCGCGCTC CTCAAAATTG TGAAGTCTG CGCTTGTCTG CCTCAGGTC
36001 TGAAGGCTC CAGAGTGCAG AAGCTCAGA GCGAGCTGTT TCTGGGTCA
36051 CATCTAGOC CTGCCACAC CTGAGCGAGT CACACAGCT CTOCCAGCT
36101 TAATTOCTCA CCTCTOCCAT GGGGATGATA AATAACATGG TGGTCTTAA
36151 GATCAOCCG TOGAAGGCTC TCAGCCCTGC CTGTGAGTA CAGCTGTTAC
36201 CTGGGAGCTC GTAAGAAGTC CTAATGCCAG GACCCACCC CAGACAATAA
36251 AATCAGAAC TTAGGGATAA GATAGGTAGT ACGCTTTTTC TAAGTCCCA
36301 GGTGATCTA GTGGGCAAC AGGTGTGAGA GCTGGCTGGT GAATGGAAG
36351 CACTTAGACA GTAGGGGCTC AGGCACAGGA GTGACACAT TTAAGAAACA
36401 ACATTCAAAC CCAGCACGAC AAGATAAGAT CAAAGGTCTT TTTCTGGAGT
36451 CAGAACTCTC GTAATGGAAG GACCCCTGTT CTCACTGGAG AGAGATGGAA
36501 CACAGCTTGG GGAGGAATGG CTACCCAAAG GCGAGGAGG TGGCAGCAAT
36551 AGTGACAAAG ATGGTGGACA CTACTCAGT ACTTGCTATA TGCCAGGCAC

FIGURE 3L

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

36601 TCTAAGTGCT TTTCATGCAT AATCCACTG GATTCCACG ACTGTTTGT
36651 GATGTCAGCC CTACTTTATC CCATTTTATA GATAAAGAAA TTGAGGCTCA
36701 GAGAGGTAA GTAACCAAC AAAGTCAACA CAGCTGGCAA GTGGTGAAC
36751 CAAGATACAG ACCCAGGGCA GGCAGTCCAG GTGTATCAGA CAGTTGGGCT
36801 GATTCCATCT CCTGTGCTT CCCAGACTCT CCTCCCACT GTCTGCTAAC
36851 TTCTGTGGC CTTTGTGGC CAGCTGGTGT CAOCAGCTT CTGGCACAGA
36901 GCTCATCAGC CTGGAGGTC ACCCTATGCC TGGCTAGAAT CTGTTTGACA
36951 GCTCATTAAT CTGCGAGTC CTCTCTGCT ACAGGTCCAG AGAGTGGACA
37001 CTGGGGAAG GGTGGCAGCT AGGAOCCAGT GAACTGGTG AGGACCTGCT
37051 CAGTGAAGG TTCAACCCOC TGGCAAAACC CTCTGTAGG TGGTCTGCT
37101 TTCTGTGCTT GTGTCTGCTT GTCTCTGCTT CTCTGTGTG AACTGTGACA
37151 CTCTGCTTCT TGAGAACACT CAGGAGATGT CTTGCATCTT TGCAGTTTGG
37201 CCATCCAGAG AACTTCCATG GCAOCTAGGG ATGGAGCCCT CACTCTTTCA
37251 CCTGGGCACT CTGCTTCCAG GCTGGGTGG AAGCTGTCAA AGGCAGAGTC
37301 CCCAGTGGCC CAGGCGGCTC CAGTACTGAG CATGGTTTCT CCTCTAAGTG
37351 TGTGCAATCC ATGCCCTCT CCAOCCAGAG GAGATCTGA GGTGCCAACC
37401 TGAGGGCTCT GAOGCCACTC AAGATCCCTT TCTTGCTGAG AGGCTATAGG
37451 AAGTGGCTCT TTTGGGGTGT TGGGAGACC CTTGGCCOC TTGTGAGACA
37501 CAGCACTCTC TTGTGGATCT GGCTGCCGGA CTTCCAGGTG GGGAGAGGGT
37551 ACAATGCAGG AGACTTGATA TTCTCTTTTG TTTTCACAGC TGCCAAAAGC
37601 CTATTGAACA AGAAGTCCGA TGGGGGTGTC AAGGTAAGTG TCTCCAGCT
37651 CTGAACAGAC TGGCTCTTT CTCCOCCGAG TCACTATGGG AATTCTTGGC
37701 AACTGGTTC CCTTTTCCA GGAATCTTC CTATCTTGC TAGTCTGCTT
37751 TAAACAGAT GCTTTGTGC TCAGAACAGA AGGTCTGCTT GGCCTGAGAG
37801 GGAAGTAGGG AGGTATTTT OCTGGCCCTA GCTGGATGGG AATGACTCAG
37851 GGAAGTAGAT CCAAAATCATA GTTTATACCA GAGCTGAATC CGAAOCTGA
37901 CTCTACACG GATGCTTCAT CTCCAGGCTT TGACTCTGG TTTTITAGGT
37951 CATTTGGTTA TCTTTCTTTT TTCTCTTTT AGAGCACAAA TCTTTTAAAT
38001 CAAATGAAG CCAAAATTCG CTGAGTGATT CAGGCAGGT ATAGGGCTTG
38051 GAACTGAAA CCACTCTCTT TTTGGTCTTT TTCTCTCTT CTACAACACT
38101 TCCAGATCC ACTGAGTGA ACAGCTCGA GCTTTCTTGA GGCATAGGCT
38151 CCTCAGAAAA AGGCAAGGC CATGGTGGAT CAOGGCTTGT TCCACTGGG
38201 TGAGGGAGCT TTTTCCATGG GACTGGGCA AGAGGAGGA CCTGGGAOC
38251 ACCAGGAGCC CTGCTGGGAA TGGCTGCTTG GCCAAGGTAG AGGAGAGGTG
38301 ACTGGGCTA CCCACAGGC CCAAGACAT CTGTAGATGC TTTGGGGCA
38351 GAAAGGATCC TGGGGCTAGG GCATTTGGTA GGAGCTCATG CTATCTTGAA
38401 GCTCCAGC TTACACTCTA GACTAGATT TCACTGGGC TTTTCCAG
38451 ATCTTGTGTC AACAGCTGAG ATACACACAC AAGCCCGTT CCTCCCGT
38501 TCCCTCCCA CTCTCTCTC TTTTCTCAT TCTCTGATG OCTGCTCTG
38551 TGTCTTCCG CCTCTGCG GGGAGCTGG GCTCCGCGA CAOCTCTGA
38601 CATGGAGCTG GGGCATGCT GCGGTCCCA AGCTCTGCC CTGAGCTACA
38651 TGGATGGAGC CAGGTGAGGA AAAGGGGCG GTTTAGTTGG AGAGAGTGT
38701 TAATAAGTAC CTGTGAGTCA GATGTCCAG CAGCATCTG TTTCTAGGG
38751 TACACAACAG AGGTGTAAGA GGGGTGTGG CTTTCAGTG CCATAGGAAG
38801 GGGCCCGCAC CTGGAGTCA CTGAGGCTG CTAGTGAOC CAOGGAGAT
38851 GGTTTAGTCC AGGAAGCTCA TAGGAGAGAG GGTACTGGAG AAAGCTGCAG
38901 GGACATAGGT GAGACTCACT TTGCAGTTT ACTTTCTGCT ATATGTTTTC
38951 TTTAAATGTA AATATAGGT CAGGCTTGGT GGCTCACTCC TGTAAATCCA
39001 GCATTTTGGG AGGCTAAGGC GGTGGATCA CCTGGGTCA GGAATTCAG
39051 ACCAGCTCG CCAACTGGT GAACTCCGT CTCTACAAA ATACAAAAT
39101 TAGCCAGTCA TAATGACGG TGCTGTAAAT CCCAGCCACT CGGGAGTCTG
39151 AGGCAGGAGA ATGGCTTGAA OCTGGGAGGC GGAGGTGCA GTGAGCCAAG
39201 ATTGCGCAT TGCACTCCAG CCTGGGCGAC AGAGCAAGAC TCCGCTGAA
39251 AATAAAGAAA AGAGAAAAGA AAACAACATG ACATTTCTAT AACITAAAA
39301 CAACAAATTA TATTGTATG GGTCTCTTA TACATATGTA TGTCTCTGC
39351 CCAGTGAGAA CACAGGGTGT GTGGTAGATT GATGTCAAAA ATATGGTTGG
39401 ATCAGTCTTA TCAGGCAGAA TTGGAAGTTT CTGTGTGAGA CCATGGGAAA
39451 TACCATAGGC CATTGAGCAG GGAAGCTATG GTGAGAGTGC TGATAGAAAT
39501 GATTTGGCAA GCGGGTGGG GTGGCTTCA TCTGTAAAT CCAGCATTTT
39551 GGGATGCTGA GCGAAGAAGA TTGCTTGAGT CCAGGAGTTT GAGACAGOC
39601 TGGCAAAAC CTTGTCTGTG AAAAAAATA AAAAAATTA ACTGGGCATA

FIGURE 3M

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

39651 GTGGTGTGCA TCTGTAGTCA CAGCTACTTG GGAGGCTGAG GTAAGAGAAT
39701 TGOCTAAGOC CAGGGAGTIT GAGCCTGAGG TGAGCCAAGA TCAAGOCAC
39751 GCACTCTOCA GOCCTGGTGA CAGTGAACOC CTGOCCTCAA AAAAAAAAAA
39801 AGATACCTGC TGTGCCCCTA GAAGTTGGGA AGGCAAAACT TAATCTACCT
39851 TTTAAGGTGT TTACAGTGGG AGAGACACAA GGCAGCTACT GTTCTATGG
39901 AGTCTGCTAA GGTCTCAGGG AGGTGTGCAC CTGGCAGGTG CTGGGGGAGC
39951 AGACAGATAA ACATCCAAAC CAGGACAGGA ATCTTCTGGA AGGAGATGGC
40001 CAGGAATGTA GCTTGAGGGA GTAGCTGGAT TTTGCTGGGT TAAGGAGGAG
40051 ACAGGAGGGG AGGGATATTC CAGGCAGAGG GAAGAGCGCA TGTGAAGATA
40101 CACAGGTTG AAACAGCATG ATGATTTCTG GAACITTCAGT ATCTTCTTTA
40151 TGGCTGAAGT GAGCAGCAAT TGCATAAAAT GAGAOCCTGA ATAAAGCAGT
40201 GACTGTTGAG GTGGAGGGCA GAGGATGGAA AAGGCACCAT TACAGAACAG
40251 GTTCTAGOC AAACITTTCTA GATACTACTG GTGTCAAAGA TGAAGTTCAT
40301 GTGCAGOCAT GTAAGATTAG OCAAGGAGC CAGCTCAAAC CATGCACATC
40351 CAGGGCCAG CTTGGAATTC ATGTTCTGGA GGCCTTGGCT GGGAGGCAGA
40401 ATCTGTGAAT TTTAAAAACA CTTTCATGAA TOCAAAGCAC ATGAAGTITT
40451 AAGAGTCTGG TAAAGGCCAA ATTTTGGGGT TATGTGTTAA GAAAGGCTG
40501 GAACAAGAGT CGGCAAAAGG AACAGAGGAA GGACAGAGAG GTAGGGGGAA
40551 AAGAGAAATG TGCAGCAGCT GCAGCTCTTC CAGGAACOCCT GAGGATGAGG
40601 GCTGGGCAGA CACATCATTA GGTAAAGGCT TTAATGAGG ACGTGGGTGG
40651 GGAACCTAGC OCTGCAATGT GTGTGTGTGTC TGACOCCTGAT ATGTGCTCAG
40701 TAAATGAGIT TTATGCCACA TTCTTTTGAG AAAAGAGCTT CAATATCATG
40751 GTGGGAACCA GAGGCCAATG ATCAOCCAAA ATTAAAGGC CAACCGGTGA
40801 TTGCGAGCGG TTGTGATGGG AGGGGTTAAT ATTTTATTG AAAGAGTTTC
40851 TGTGACAAAT AATCOCCTCT AAAAOCAGT AGAAGCTGGG CGTGGTGGCT
40901 CAGCCTGTGA ATCOCAGCAC TTTGGGAGGC CGAGGCGGGT GGATCAOGAG
40951 GTCAGGAGAT CGAGACCATC CTGGCTAACA CGGTGAAOC CCATCTCTAC
41001 TGAAAATACA AAAAATTAGC CGGGTGTGGT GGCAGGCGC TGTAGTCCA
41051 GCTACTTGGG AGGTTGAGGC AGGAGAAATG CGTGAACOCG GGAGGCGGAG
41101 CTGTGAGTGA GCTGAGATTG TGOCACITGA CTCCATCTG GGTGACAGAG
41151 CAAGACTCOG TCTCAAAAAA AAAAAAAAAA AAAAAAAAAA AOCAGTGA
41201 TAGGCTAGGT GTGGTGGCTC ACATCTGTAA TOCCAGCACT TTGGGATGCT
41251 GAGGTGGGCT GATCAGTTGA GGOCAGGAGT TOGAGACAG OCTGGCCAAC
41301 ATGTTGAAC CCCTCTCTTA CTAAAAATAC AAAAAGTAGC CAGTAGTGGT
41351 GGTGCAOCOC TGTAGTCCA GCTACTCGGG AGGCTGAGAT AGGAGAAATCA
41401 CTTGAAOCTT GGGGGGGGCA GAGGTTCGCG TGAGCTGGGA TTACACCACT
41451 GCACTCCAGC CTGGGGGACA GAGCAAGACT CTGTCTCAA AAAAAAAAAA
41501 AGGAAGATAG ATGATCAAAG AAAATAAACT GACAAOCTGA AAACAGGAA
41551 GTAGAATCG ATAACAATG TGGAAAAATT TCTAGCCTCA CTAGTATCAG
41601 AGAAATGCAA ATTGAAACAA GGTGOCATTT TTGGACTCTA GTTAGTGATG
41651 GTAGTGAAAA CCAGAATGGT CCTTTCTAAA ACAGCCTGTG TGTCAAAAC
41701 ATAAAAATGC TTCTAOCCTT TTTTACCCCT TTAATTTCTAC TTCTGAGAGT
41751 TTTTCTCTAA GAAATATTTT AAAATAGGAA AAGCTAAAA GCAGAAAAAT
41801 GTTGAACATG ACATTAATTA TAGCTGTGGA AAGATTGGAG GCTGGGCACA
41851 GTGGCTTATG CTTGTAATCT CAGCAGTTTG TGAGGOCAG TTGGGAGGAT
41901 TGCTTTGAOC CAAGAGCTTG AGAOCAGCCT GGGAAAOGTA GTGAGAOCC
41951 ATCTCTTAAA AAAAAAAAAA AAAATTAGCT GAGTGTGGTG GAAOGTGGCT
42001 GTAGTCCAG CTAATTGGGA GGCTGAGGTG GGAGGATTGC TTGAGCCAG
42051 GAGGCTGAGG TTACAGOCAG GATCACACCA CTGOGCTOCA GOCCTGGTGA
42101 CAGAGTGAGG CTCTGTTTAA AAAAAAAAAA AAAAGAGAGA GAAGAAAAA
42151 AAGATTGGAG CAAATTTGAA AAGCCAGTAA GGAGCCAGAC ACAGTGGTGC
42201 GTACCTATAG TOCCAGCTAC TCAGGAGGCT GTGGCAGGAC AGAATTGCTT
42251 GAGCCAGGA ATTGAGGOC AGCTGGGCAA CATAGTGAGA CCCCCACTC
42301 TTAATAATGT TTTTAAATTT AAAAATAAAA AGATTTTITA AAAGCCAGTA
42351 AATGACTAAA TAATTATGGG AAATCTACTT AATAAACTAT TCAAAAGTTA
42401 TTAATTTTCA TGACCGTAGG GATATTTTAA GTGAAAAATA AAGTGAGAA
42451 ATGTTTATTA TTAAGTGAAG GAAGTGGTAT ATAAAGGAGT ACAGACAAGC
42501 CAGGCACGGT GGCTCACGCC TGTAAATCCA GCACITTTGG AGCCCGAGGC
42551 AGACAGATCA OGAGGTCAGG AGATOGAGAC CAGCCTGGOC AACATGGTGA
42601 AACCCGTCT TTAATAAAA TACAAAAATT AGCTGGGGT GGTGTGGGT
42651 GOCGTATATC CCAGCCACTT GGAAGGCTGA GGCAGGAGAA TOGTTTGAC

FIGURE 3N

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

42701 TAGGGAGTGG GAGGTGTGGG TGAGCCAAGT GGGCCACTGC ACTCCAGCCT
42751 GGTGACAGAG CAAGATTCTG TCTCAAAAAA TAAAAAAAAG AAGGAGTACA
42801 TACACTATCA TTCTAAATTT GGTTTGAAGA AACGTGTTTG TAGATATTTA
42851 TTCAGTATAT AATATGTGGA TAAAAAAGG ACTGGAAGAA AGCCACTTAA
42901 GGTCAACAG TAACTTCAC AGGTGATGGG AATTTGAGAA ACTTTTGTGC
42951 TTACACATTT TTCTGTATTC CTATATTTTT CATCTAGATT GTGCACTACT
43001 GTTATCAGAA TTTTTTTTAA ATACTATTTT TTTTTTAAAG TAAAGCATAA
43051 TACCAGGTGT GGCAACTCAT GOCTGGTAAT OCCAGCTACT GGGAGGCTGA
43101 GGTGGGAGGA TTGCTTGAGC CCAGGAGGTT CAGCTGGGC AACATAAGCA
43151 AGACTOCATC TCAATTAAAA AAAAAAGAAA AGAGGTAAGA CATGTGCTTG
43201 TATTATTATA TCTTATAATG ATATCTTTTT TTTTGTTTTT TGAGACAGGG
43251 TCTCACTCTG TCCCOCTGGC TGGAGTGTAG TGGTGTGATC TTGGCTCACT
43301 GCAAOCTCOG CCTCCCGGGC TCAAGTGATT CTTCOAOTC AGOCTCTGA
43351 GTAGCTGGGA ATAAGGGCAT GTGCCACCAC GCOGGGCTGA TTTTGTATTT
43401 TTTAGTAGAG ACGGGGTGTC CCAGGCTAGT CTGGAACCTC TGAGCTCAGG
43451 TGATCTGCCC GOCTCAOCTT CCTGAAGTGC GGGGGTTTACA GGCATGAGOC
43501 ACCAOGCTG GOCTATAATG ATATCTTAAA AGATTGCTTTT CTTTTTTTTT
43551 TTTTTTTTTT TTTTTTAGAC GGAGTCTCAC TCTCAOCCAG GCTGGAGTGC
43601 AATGGCATGG TCTTGGCTCA CTGCAOCTC CGOCTOCCGG GTTCAAAACA
43651 TTCTOCAAOC TCAGOCTOCC AAGTAGCTGG GACTACAGGC GCGTGCCACC
43701 ACACCCAGCT AATTTTTTATA TTTTGTAGTAG AGACGGGGTT TTGCTATGTT
43751 GGCCAGGCTG GTCTOGATCT OCTGAOCTTG TGATCOAOC GOCTCAGCCT
43801 CCCAAGTGC TGGGATTACA GGCATGAOCC ACOGTGCOOG GOCATTTGCA
43851 TTTTTTAAAA AGACTGGAAG ATTGCTAGGA GTATTAGTGG TTTTCCCATG
43901 CCCCCTCTCT GTTTTCCAAA TTGCTGTGAT TGTGGCTGCA GTCCTTTTAT
43951 AATATGAAAC AGGTAAATTA CAACTTATGT TGTGGCTGCA TCAAAGGGGT
44001 GAGAAACGAA AAGGAGAGGA CAAAGCAAGA TGTGCAGAGT TCGACCTTTC
44051 CAGGCTCTCT CAAAGTCAAG GTTTTGATCA ATGTTATGAG GGAGGCTGT
44101 GAAGTAGCTC AGATGGTCTT GAGCTTTTCA CATCATGGAT TCTTCTTTTA
44151 GATOOCACTT TCCCTTCCCA ACTOCCOCTT OCTCAATTCC TACTGCTTAA
44201 GTGTCCATAG GGCATTTTCT TTTTCACTGT TCAGAAGCTT TCTGCAAGAT
44251 GTTCAAAATA CTAGCATTTG TTTGAGCAGC TAGTCTGTCT TGTGTCTTTG
44301 ATTTGGGGGA CTTAGCTTCT ATTTAGATTT CTTTGAAGCT GGATGCCAGT
44351 GACCCAGGCT CTATGGAAGA GTAGAGGACA CTTGTGAGGA TGACTGAAGA
44401 GGCCACAAC TCTCAGATCC TGAGAGTGTA GGACAACCTG TGCCCTCTGC
44451 TAGTOCCAGG CCAGAATTGC CATCTATCT TTAaaaaaga AAGCAAGCAA
44501 GAAAAACGAA AGGTATATAG TATTTCCCTA AGTACTATTT GAATTATTTT
44551 GTTAAATTTA GTATGAGAAA GAGGTTTGAA CGCTTTTCCA GCTTAAATTT
44601 TAAAAATAAT ATACAGTTTT TAAGTAAAAG TGAGATATGA TTCTTTAGAA
44651 ATCATCTGGC ATTTAGOCAG GCATGGTGGT GTGCAOCTGT AGTOCTAGCT
44701 ACTCAGGTGG CTGAGGCAGG AAGATOCCCT GAGCOCCAGG GGTGTAGGCT
44751 GCAGTGAGCC ATGATCATGC CAGTACTTCA GCOOCCGCAA TAGAGCAAGA
44801 CCTTATCTCT AAAAAAATAA TAAAAAGACC TCACATTTAG ACAATGTGGT
44851 AGTGTGCTGG TTCAGAAGGA GOCAGCTAT GCATGGCTAA GGGCAATOC
44901 CTGAATGGAG AAGGAAATIG AAAAAATGTG ACTAAOCTGA GAAACAGTCT
44951 TTGAAAAAGG GTGATCTCAG GTTCTCATGC AGGACAATTT AGGAAAAAGA
45001 GAGCAAGOCA GGAGAAGGCT GAGAACITAT TCCCATTTAG TCAAAATCT
45051 GCTTTAAGTC AAGATCTGTC AATGGOCTTT CACAACAAGC CCTGAAAT
45101 CAGCAGAACA AAGACTGGGC CTGGTGAGTG AGTGCTACG CAGAGTTCTT
45151 GCTGCOGTGA TTCAGTGCAA GTTAGAAAC TGTTCTCTTC TTTAGCCTGG
45201 GGAaaaaoca AAGTCAGCAA AOCAGCTCA ACTCAGCAA CTTTGTGTC
45251 CTGTATGCTA ACTATAAGGC ATGTTGCTAG GTACTGTGGA AATTGTAAAG
45301 ACACATAAGA TAGGAACCTT CCTGAAAGCA GTAACTTTT AGTTGGGTAA
45351 AGGATATAGG AGATATACAC ACACACACAC ACACACACAC ACACACACAC
45401 CCACTACTTT ATATATATGA ATATAAGGA ACTOCTTCTT TTTGAGGGAT
45451 GATTTTTOGA GTAAATATC ATATTGAGC ATATTTAAAA GGOCACITGA
45501 AGGCTGTGTG CGTGGCTCA GCTTGTAAAT CCCAGCACTT TGGAGGGGOG
45551 AGGTAGGTGG ATCAOCTGAG GTCAGGAATT OGAGAOCCAG CTGGCCAACA
45601 TGGCGAAACC AGTCTCTCTA CTAaaaaatc AAAAAAAAT CAGTGGGGOG
45651 TGGTGGGGGG CGOCTGTAAAT OCCAGOCCT CAGGAGGCTA AGGCAGGAGA
45701 ATTGCTTGAA CCAGGGAGGC GGAGGTGCA GTGAGCOGAG ATGGTGCCAC

FIGURE 30

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

45751 TGCCTCCAG CCTGGGCAAC AGAGTGAGAC TOCCTAAAA TAAATAAATA
45801 AATAAATAA TAAATAAATA AATAAATAA TAAAGGCOA ATGTAAAAGA
45851 GGCTAATAA TATTTAGGTT TTTCTTTTCC TTTAAATCTA ATTCTAAATT
45901 ATGGACCAAT GTCAATAATT GTAGCTCTT TCGTTGATTA TAATAATAAT
45951 CCCTGAAAAT GCTTCTATAA GAATGCTGGC CGCTTGAGGG CAGGAGCAGT
46001 TTATCAGCTG TGTTTAOCCT AACACAGCCT CAGTGTTCG TGGGCAITGT
46051 TAAATGAATG TGCAAAAGTT GAAACACAGA CGACATAAT ACAGGGGGAC
46101 CTTACCCCA GTGAGCTAAT GATGACATG ATAATTAOC TTTATTTTTT
46151 AGACACAGTC TTCTGGGATA TATTTTCAGT GTTCAAGTG GTCTTCATCT
46201 TGATGOGTCT GTTTTCACATG TGAACGTAAA GTTGTGAGC ATCTAGTTGA
46251 GGCTGAGGAA TCACTGCTTT CAACATTOC TGTGGCTTAC ATCCTGCAAT
46301 TTTTATGATC ACTGTAGTTT TAATCACTGG CACTCTGTG TTTCTATTTT
46351 CCACGAATTG CAAATGCAA TAAAAAATTC AAATATTGTA AACAGCATG
46401 GCTATACIGA CAAAGGAAGG CCAACATTTA ACTGCTAGGT GATTTTCAAA
46451 AGCTCAGCAT CTTTATGTAA AAAGCATAGT AGGGATGAG CGAAGTCAGA
46501 AGTCAAATTT TATTAGAGCT GAGGAGAGCC TGTAGTAGCT TTTGCTTTTT
46551 CCCTGGTGGC TGCTCAGTTG AATTTTCAGC AGTTCTAGTA ATGAGAGAAA
46601 ATAAATAACA TTACAGGGTG AGCTAACCT ATGAACCCAG ACCGTAAAT
46651 TTGTAGCAAA ATGATACTTA ACCTCACAGA CTTGTGTCTT AATCTCCTTA
46701 AGAGGCTTTTT TTTGAGCAAG GCTGAGACAT CTCAGAAGAT ACTAAATCTG
46751 TGCTATGAA CCTGAACCA AAAGAGTTCT TOCCTOCCAG GGTCTGGAGG
46801 GTGTGAGTGC CTGTGGTTC GTGTGCTGTT TAAOCTCTG GTGCTGGACT
46851 CCGGCTCTCC CTGCTCTCT TTTCTOCTGA TGCAGAGCC ACCTGGTGTG
46901 GCTAACCTGC AGGCTCTCTG TGCTTCTCTT CTTAOCCTCT CTTTCCCTTT
46951 CTCTTTTCCCT CTTGCTGTGG TGTGTCCAGA AAAGGAAGTC GAGTTCCAGC
47001 GTGCAOCTAA TGGTGAGCCT TGCTGCOCA CCAATGCOCC ACTOCATGCT
47051 GCTGTGCOCC GCTGCOAGC CAAGCAAOCC TGTTCGTGCA CGTGGGTGTG
47101 CCTCACTCAT CCTCACTGCA TGTCTGTGCT GTGTGGGAG GTGTGGCTG
47151 TOCTGOCAGG CGGGGGOCAT TGCCCAAGGT CACCCAGTAG CCTAAAAAGT
47201 GGACATTTGA AGGGGTGGTA CGGCAOCCOC TGCTGTGGAG CTTGGACAGA
47251 CCCCAGAGAC CCAGGGTAGG ATGTGAAGCT GGTAGGGACT TGGGGCAAGC
47301 AAGGGAGAGA CCTCACTCT CTTGTCAOCC AGAAGGAGAG GCGCTGCTTC
47351 CCAGGCATGA GGAGCTGCTT CCTACAGACT GGCAGCTGGA GGGCAACTGT
47401 GTGGTGGCA GAGGAGCTGG TTGCAAGCTC CCCTGTGTA GTCTGCTCT
47451 CCTGGCTCTG CCCCCTGCA AATCOCATTC TCTCTAGCTG TGCCAGTGG
47501 TTTATTTCTG CCAOCCAGCC CTGGGGGAG AGCTAACTCA TCTTTCTCAC
47551 GGGACACTGG GCAOCCAGGG CAACACAGCA GCTGAGTCA TTATGAOCC
47601 ATCCATTTAA ACCAGAGGTG GGGGCGGGC GCGATGGCTC AGCCTGTAA
47651 TOCTAGCACT TTGGGAGGCC GAGGGGGTG GATCACAAGG TCAGGAGATC
47701 AAGACATAA CAAGGTGAAA CCTGTCTCT ACTAAAAATG CAAAAAATTA
47751 GCGAGGTGTG GTGGTGGGG CCTGTAGTCC CAGCTACTCA GGAGGCTGAG
47801 GCAGGAGAA GGCTGAOCC CAGGAGGGG AGCTTGAGT GAGGAGAT
47851 CGGOCCTCTG CGCTOCAGCC TGGGCGACAG AGCTAGACTC CGTCTCAAAA
47901 AATAAATAA CCAGAGGTGG GGCACCTGG GTGACATOC AGCCTCTGC
47951 AGGTTTTGTG GGCACCTGG AGTCCCTGCC CCTGTGAGG GTCTTGGCT
48001 CAGCTGGGAT TTACAGGTAG GGCAGCCTC TCTAAOCCAC CCGAACAGG
48051 TCAGCATCAT TCACTGAGCT AGGTGGGCTT TGCTTCTTGG TGGGAATGAG
48101 AGACAGCAGA GCTCCCTGTA GTTTAGACCC ACOGTCTCAC TACTCCTGG
48151 CCCCCTCTTC TCTAGCTGT GCGAGTCTGT GGAGTCTTGT TCAGTGGAGT
48201 CACTTGGTGC CTGGCTTGG GTTCCATGCC TAGCCTGGG TTTGGGGATG
48251 TCTGAGCAT TGACAGCAAG CTGGCGGTGG ACGGCTTCAG GTCTGGTCCA
48301 AGAGGCTCC AGGCAAGAAG TAGGACAGTC AGGATGCTTT CTGTGTATGT
48351 CCTAGGAGAG AAGACACACA TTCTAGCTGT OGATGTATCA TCTGTGCOCT
48401 GTGAGGGAT GGTAGCCACA CATTTGTCTC ACTGCTATTT GAAGTACTTG
48451 CAGGCATCAG GCTGCTCTC AGTGGCCCC AACCCACTG GAATCAGTG
48501 AGATGGAGTA CGCTGGTTAG GGAATATCA GAGGCAAGA ACATCACATG
48551 GATATGGCTC CCTGCOCTGG AGATCAGCCT TCTTCTTTTC TTCCATCTTC
48601 CCTTGGCCCC TCCCTTGTG TGCCOCTOOG TGTAAATGTT TGTGTGTTC
48651 GTTGTCTTTT GGTTTTTTGA GATGGAGTCT TGCTCTGTG CCGAGGCTGG
48701 AGTGAGTGG TGCAATCTTG GCTCACTGCA ATCTCTGCT CCGAGGTCA
48751 AGCAATCTC TTGTCTCAGC CTCCGAGTA GCTGGGATTA CAGGCATGTG

FIGURE 3P

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

48801 CCAACATGOC CGGCTAATTT TTGTATTTT AGTAGAGAG GGGTTTCAOC
48851 ATGTTGGCCA GGCTGGTCTT GAACCTCTGA CCTCAGGTGA TOCACCGOC
48901 TTGGCTOCC AAAGTGCTGA GATTACAGGT GTGAGOCACC GTGOCACOC
48951 AOCACCATG TAGTTTGAAG AGGCAAGGAG ATATOOCTGG TGGTCATGGT
49001 GCTGTTGGGA ATGTTGGOC GTGTGTGGOC TACTCTGTCC TGGGGGCTGG
49051 ATTCTGGGAC TACAGCTACA GOCOCGCTGG GTTTCACCTG CCOCTOCCOG
49101 GAACACTGOC CTCTAGCTG ATCAGGCTA AGATTGTGCA GACAAAAGG
49151 TGAACAGCAC AGTCTGACT CTGCTOCCTG AGGTGAGTGA ATGCAITTTG
49201 TGTCTGAAG GGACTTCCAC CCOCATCTC TGGACACCAT CTCTAGGOC
49251 AGGCATACIT TTCTTTCTC CTCTCTCTT GTTTCAGGCT TOGAGCTGGT
49301 GTGTATAGAA GGAATACAG GTGCTGGGT GAAAGTGAC GAGGAGACTG
49351 CCAACAGATA GGGGACAGA GTTCTGAAT TTTGTCTGC TTCTTATAA
49401 ACTAOCOCOC TTCTTCTGT ACAGTGGGAA GAAGATCTG AACTTCTTTG
49451 GGTGAGGTGT GGAITTTGCA ATGACCTGGC AOCCTGSCATA AGCAGAGATT
49501 TCTGGAGGGA TGCTTTAAAA CAAGGCTTTG GGCTGGTCC AOCCTGAGGG
49551 TGOCOCOCAGA GCTAGGTCTC TGGGOCOCAC AAATACCTCC TCTGATCATC
49601 TCTCTAGCCA TOGCTOCCAT CTACACAGCG TTATGGAGGC CACCTCAGGC
49651 CTACCTCTC CAGGOCAGAC CAGGGGGCAA GGGAGGTCTG GGAGTTGAAC
49701 CTGAGTGGOC TTGGGGACTC TGGAGGAAGT AAACCATCTG TTTTCTGTG
49751 TCAGOCACAG AGCAACAACA AAAACAGTCT CGTAAGOCOA GOCACAGAGC
49801 CCGGOCCTTT GCAGAGGOC ATGGTACCTC CTGACTACAG CTCTOCCGC
49851 TCTGAOCCTG CCTGCTOCT GOCCTTOCC TCTTCTOCT CTGTGOCOC
49901 CTCTCTGGC TCTGGGCTG TTCTTTCTT GGTCCOCATA GAACCTGACTG
49951 CTCTGTGTG CCGCTGTAT GOCCTTOCC CTCTATGTG CCGCTGGOC
50001 GCGCTOCATC CCGCATGGCA GAAGTGTGC TCTGCTOCT GCTOCTTTG
50051 CTGGTGGGG GAAGAGTAT CAGGGCTCTC AGCTGAACCT CCGAGGOCOA
50101 GOCAGGAC CCTAGTGGGT CTGCTGTGG GGTGGGAAG GTGAGTTGCT
50151 TAGGAAAGGA GAGGGTAGGA GCTTCTCTG GACCTGAACA TCAGTCTCTG
50201 GAGGOCOCCT TGTAAAACT GOCCTCAGCT CTOCTTTGCA AAGOCAGAAA
50251 CAGGAAAGAG GGTGGGGTC CCACTCTCTG GATGGTCTG AGGTCTCCAG
50301 GCTCTCTGAG TGCTCATGC TGGCTAAGTT CTCTCTGGG TCTOCCAGG
50351 GTCTGTGTG CTCTGGAGG TCTCTCTGCT AGTGGTGGCT AACTAGAGAG
50401 TCAGCAGGG GGTGACTGG AAAGAGGAG AGGTGATGTT GOCCTGCTACT
50451 CCGCTCTCTG CCGAOCCTCA TACCAAGTGA CGTGGGCGG TGGGOCAGG
50501 AACTAGGGAA GGCAGAGGC GGGGCGAGTG GGCAGCTCTC TGGGCTCAGC
50551 TTGCTGAGGG GGOCTOCTGT CTTGGCTCTT TCTGGGAGC CTCAITCTTC
50601 TGOCATGTT CCGCTCTAC ACATTOCCG TGATGAAGC TGTGGGCGG
50651 GCGGCTCTCA GGAAGAGOC ATAGTCTGT CCAAGTCTG CCGGCTAATC
50701 GGAACOCOA TGTGAAAGA GOCCTCAGAA CTGACAGGAA TCAGGAGAG
50751 AGGOCCTGTC TGTAGGCTC CTGGGCACT GCACTGCOA GGOCTCTCTT
50801 TCTTACAGC CAGTGTGTC TGCAAAATC CAGGGCTATC CAGCTGCOO
50851 GGAOCOCAG TTGAGCGGG ATATTTTGTC TCTGGAGAT GGTGGTGGG
50901 CAGGCTCAG TGTCTATCAT AGGTCTGCG GGGTCTGAG GGTGAGGTG
50951 GGTCTCTCA GGAAGAGOC ATAGTCTGT CCAAGTCTG AAGGCTAATC
51001 TCTCTCTCT CTACAGGAG CCAAAACA CTGTGGTACA CAGGCTACA
51051 GATGGATCA AGGTGAGTG CTCTGAGOC TGOCTCTGC TTTCCAGGTC
51101 AGCAGGAGC AGGTGGGCTG GGTCCAGGG GTCTACAGG TGCAOCCGA
51151 GGCACAGGT TTTGACAGG CTACAGCTGAA GGTAGOCCTT GOCACAGIT
51201 GCTOCATGCT GAGGAAGGC ATTATAOCTT ACAGAGCTCA GGTCTTGCAG
51251 TCAGACAGC CTGGTCTGAA TCTGGGCTT GCACTTAGT ATCTTTATC
51301 TGCAATTTG GATGATAAT AATAGAATCT TCTOCCATAT GTGGAGGTT
51351 TAAATGAGAG TAAACGTTCA CTGAAAAAT AGGCAAGAGT ATCTCCAGC
51401 CTTGGAGGCT TCTOCATGG CTGACOCCTT TGTGOCCTG ATGTTTTCAC
51451 CAGCATTOCT GAACATCTGT TAAGOCOCAGA TACCATCCAT GGTCTGGCT
51501 TACAGAGGTG ACAAGACAAA TTATCTGTTC AAACGGTGGG TGGGATGGGA
51551 GGCAGATAAA AAACCAATAA GCAACAGAT AAGATAAGCT GGCACCGTG
51601 GCTCACACT GTAACTCTCA CACTTTGGGA GGCACAGGTG GGCAGATGC
51651 CTGAGCTCAG GAGTATAGA CCACTTGGG CAACATGGTG AAACCTGTG
51701 TCTACTAAAA TACAAAAAG TAGGCAGGTG TGGTGGGCG TGOCTGTAGT
51751 CCACTACTT TGGGAGGCTG AGGCAAGATA ATTGCTTCTG CCGGAGGT
51801 GGAGGTGCA GTGAGCTGAG ATCAGGOCAC TGCCTOCCAG CTTGGGCTAC

FIGURE 3Q

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

51851 GCAGTGAGAC TTAATCTCTC AAAAAAATA AATAAGATAA AATCTAATGT
51901 CAATAGGTAA TCTGAAGAAA ATGGCAGAAA GTAGAGAGAG GGOCAGGTGC
51951 GGTGGCTCAT GCTGTAAATC CTAGCACTTT GGGAGGOCOA GGGGGGGGA
52001 TCACTTGAGG TCAGGAGTTC AAAAOCAGOC TGGCCAACAT GGCAAAAOCC
52051 CATCTCTACT AAAGATACAG AAATTAOCCTG GGGATGGTGG CACATGCOCTG
52101 TAATCCAGC TAOCCTGGAG GCTGAGGCAG GAGAATOGCT TGAOCTGGG
52151 AGGCGGAGGT TGCAGTGAGC TGAATOGTG OCACTGCACT TCAGCOCTGGG
52201 OGACAGAGCA AGACTCCATC TAAAAAATGA AAAACAGAAA AACCTCAOCCA
52251 AACTAGACAG AGAGAACAGG GOCPTGAATT AAGTAGTCAG GAGAGGGCTT
52301 CTITTCAGGAG GTGATATCTG AGCTAGAAAC TGAATGGTGG GTGGGAAGGA
52351 GGCAGOCAGG CCAGCTCTGA GGCTGAGTGC OCTAAGCAGA AGGAACTGAA
52401 GCTCAGATGT GGCTTTTGTA ATCAAGCAGA GGAAGAGCA AAGTGAGAG
52451 GGGAGAAOCC TAGGAGAGTG ATGAGGTGG AGAAGCAGCA GGGCTGCTA
52501 CAGAGGOOCT TGTAGGAGTT TGCAITTTTCT TOCAGCAGCA AGGAGAAGCT
52551 AITGGGAGTT CITAGCAGGA GTAACAGAAT CTAGTTGACA CTTTAAAAACA
52601 CCACTCTGGC CTCATGATCA AGAACTCTAG GGAGGOCOGG GGTGGTGGC
52651 TCAGGCOOCT AATOCCTGCA CTTTGGGAAGG OCGAGGOGAG TGGATCAGCA
52701 AAGGTCAGG GCTOGAGACC AGOCTGGOCA ACATGATGAA ACOOCTCTC
52751 TAATAAAAAAT AAAAAAATTA GOCAGGCATG GTGGCAGGCA OCTGTAAATOC
52801 CAGCTACTCA GGAGGCTGAG ACAGGAGAAT CACTTGAACC OGGGAGGCAG
52851 AGGTTCAGT GAGOCAGAT CATGOCATIG CACTOCAGOC TGTGCAACAA
52901 GAGCAAACT CTGTTTCAAA AAAGAAAAAC TCTAGGGAGG AGGTAAAGTGT
52951 GGAAGTTAGG GAGACCATGA AGCTGTATC ATGGTTTCAAG TGTGAGATGC
53001 TGGTGGCOCT GAGTCAGGTT GTAGCTGTGC ATTGGAAGTG AAGAGGTAAAG
53051 ACATGGGGTT TACTTTGGAG GCAGAACCAG AAGATTTTAT TTTAGATTGG
53101 GOGATCTGAA TATAAGGGAA AAAGAGAAAG AGAAGGATTG AGGATGACTC
53151 CAGGTTTTAG OCTGAGTAAC TGGGTAGATG GTGGCATTTA CCAACTGGGG
53201 GAAGACTAGG GAGGGGATTT GGGAGAGTIC AGACAGOCAG GGTGGAAGCA
53251 GAAOCTTOCA CAATTOCTOC TTGCAOCTCT TGTAGGAGCA GAAACTCTGC
53301 TTTTGTCTCG CTTTGTCTCT CTGGCTTOCA AGGGATGGAG CATATAGAAA
53351 CATGTTCTTT TTGGCTTACA GGGCTOCACA GAGAGCTGCA ACACACCAC
53401 AGAAGATGAG GAOCTCAAAG GTAGGTGCTG GOCCTTGGAG GGGGAAGGAC
53451 TOCAGCAGTG AOCAGGTAC CTGGGCTOCA ATGGGGCAOC TGOCITTTTCT
53501 GTOCCAGAA CTGGGAATGC TGGCTOCTAT GOCCTAGGA GAGGGCTTGG
53551 TATAAAAGCT ACTTTOCAG AGOCAAGATA TGAGGCOOCT GTCTGGTGT
53601 GCTGAGTTGG GCAAGAGGCT TCTCTCTTTT GAOCCAAAGT CTAATAATAGC
53651 TAAGCTAGAG ATTCTOCAGG GGOCAGGCT CAGAGAATG TTCTGTGTGC
53701 TGATAATGAT GTGOCATOCA AGAACAGGGG TACCOCAAGT COCTGCOGAA
53751 GTAGOCTGTA AGTGCTATGA GTCAATAATA GAGTGAOCAA TCACTOCTGG
53801 TTTTCTCTCG ACACAGAACT TTTGGTTTIA AGACTGTGAT GGGCCAGGAG
53851 TGCTGGCTCA CAOCTGTAAT AOCAGAACT TTGGGAGGGC CAGGGCAGAA
53901 GGATTTGCTTG AGAOCAGGAG TTTGAGACAA GCTTGGGCAA CATAGCAAGA
53951 CCTTGTCTCT ATTTAAAAAA AAAAATTAGG AACAAATAAA TAGGCCAGGT
54001 GGGTGAGCCG ACACCTGTAA TCOCCACACT TTGGGAGGCC GAGGCAAGTG
54051 GATCACTTGA GGTGAGGAGT TCAAAACCAG OCTGGOCAC ATGATGAAAC
54101 COOCTCTCTA CTAAAAATAC AAAAAAAGGC OGGGGTAGT GGCTCAOGCC
54151 TGTAAATOOCA ACACITTTGGG AGGOCAGGT GGGTGGATCA OCTGAAGGTC
54201 AGAAGTTCAA GAOCAGOCCT GCCAACATGG TGAAACTOCA TCTCTACTAA
54251 AAATATAAAA AATTAGOCAG GTGTGGGGCA GGTGOCCTGTA ATGTAGCTA
54301 CTGGGAGGC GGAGGTGGGA GAATGCTTG AACCTGGGAG GTGGAGGTTG
54351 CAGTGAGCCG AGATCAOCCO ATTGCACTOC AGOCTGGGCA ACAAGAGOGA
54401 AACTTCTTCT CAAAAAATAA AAAAAAATAA AAAAAATAG COGGTGTGG
54451 TGGGGGGTCT CTGTAAATOC AGCTACTOCC GAGACTGAGG CATGAAAATG
54501 GCTTGAOCCO GGGAGGTGGA GGTGCGAGTG AGCTGAGATT GCAOCTAGC
54551 ACTOCAGOCCT GGGTACAGA GOGAGACTCT GTCTCAAGAA AAAAAAATAA
54601 AAAAAATATAT ATATATATAT ATATATATAT ATATATATAA ATATAAAACC
54651 CAGATAGTCC TGGGAACACT GGGATGAGTT GGTCACTCTA GTCTTAAAGAT
54701 TTTTGGCTGA ATGATGGAGT TGGAACTAAT CTGACAAOCC TGAGGCCACA
54751 TTTTGTCTAT TOCTGGTGGG COOCTAAGGA CCACTAGOCCT AAGCTTGGGC
54801 CTGGCTAGAG TGCCAGGGCG GTGGGAGGGC ATGGCAGGCT GGAOCCOCCG
54851 GAATCTCTGT OCTGCTCTTT GATTTGGGCT OCTGGAATTG CTOOCTTTGC

FIGURE 3R

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

54901 CTGAATTTCAG TAAGTGAOCT TGGGOCAGGA CATCAGAAAA GACAGAGGAA
54951 CACTCTAGGA CAGAGCTGGG AGAGCATGOC CTGGGTGGCA AGGGGGCAOC
55001 AAACCTTTTGG GAACCAAAAA AAATAGCAGA AAGCTGOGAG GAAGTGAATC
55051 ATAGTAGCTC CAGG000CTG TGAGTGAAGT CAGATCAGTT TTGATTOCGG
55101 CACTGCTGGC AACATAGGAG GCGCTGTAC TGCTGGGCTC TGGAC00CTGT
55151 GG0CTGG00C OCTGGAACAT CTTO000GGG ATCAGGGGTC CTTGGACAGG
55201 CTGTGTGAAG GCTGTCTGG AAGCCACAGC CCAGGTCTGG GCAOCTG00T
55251 GGTG000CTCA GCTGGGAGGC CTCTCTGGCA GAGG0GG0GG CGTGGGATGT
55301 OGTOCAGTGT CCACAGCAGC CTGAGGOGAG GCGT0000CTT G0000GGCTC
55351 TACAG00CA TGGGCT0GGG G0CTGTCTGG CTGTCT0GCT CAOCTG0CTT
55401 GCTGTGTTTG TTTTGGCTGC TCTG0CTTGC OCTG00CTGC OCTG00CTGG
55451 CTGGCTAGCT G0000GCTOC GCACTGGGAA TGGCAGCTCG GTG0CTGAAG
55501 GA0GGAGCTC C0GGGACAGA ACAG0000CT CTGCAGGCAT GCAG000CAG
55551 CCTCTCTCTCT GCTOCTCAGC CAGTAAGTGT GAGGGAGGCA CATTCCTGGCT
55601 T00GTCT00C TGGCTGT0C TGAAG000CT CAGGGAC00C CACCACAGCT
55651 GTCAGT00CA C0CAOCTG0C CGTGGTAGTA AGCTCTGGGA GCATGG0CTC
55701 TGCTGGGGGT GGGGGGTAGA CTGGAGGTGC TGTGTAGAAC AGGCAGGGGC
55751 C0CTGAGTTG GGGG00CAAA GAAATATGAG AAGTGTGGGT GGAAAAACAT
55801 GG0CTGGGAT GAGGGGAGTA GAAAG0000C AGGATGTGCA GTGGG0CTTG
55851 C0TCAG0GCT GAG0CAGGAA GAAGGCAGA GT0GGAAGTC AGGTCTGTGG
55901 GGGTGGGAGT GGGATGATGG GGAAT0GTG ACAG0GAGGA ACTGTGTGTG
55951 GGAATGATGT CTTOCTGAGT CTCAGCATAA CAGTAATTAAG AGCATGGGGT
56001 CAGAGGCAAG ATAGATCTGA GTTTAAATCC CAGCTACACT G0CTTCAAGA
56051 GTGTGAAGTT TA00CT00CA GAGCTGCAGG TTOCTTATCT GTAATGTGGA
56101 AATAAAATGG CACGCAOCTC AGAG0CTTGT TAGATAAAAG ACAAGGCAGT
56151 AGGAAGTCTT GATA0GGTGC CT0GATGGGT TATCAGTAGC TCAT0CTCAT
56201 ATTTCTAGTT A0GTCTGTGC TGGAGGATGC CTTTGTCTGC TGCTTTT0CT
56251 C0CA0CATCT AT0CTTG0AG AGTTTCTAAG CACA000CTC TT0G000GTG
56301 GGG000CAGT CAGGTCA0C AGATGGGTCT GGTGGGGTTG GAGAGGGTGT
56351 GTGTGTGTG GGTGCACAC TG0CTGTCTC TTTTGAAGC 0GAT0GA0CT
56401 C0CTGTCTTC CTTA00CTGC TGCTGTCTCA C0TGAGCTG TGG0CTAG0G
56451 GGGCTGA0GG CTGTGGGG0C C0CT0CTGGA TGTG0CTTTG GCTG0GCTGC
56501 C0TGTO0CAA CTGTGTCTGT TGGCTGTCTT G0000GGCTG G000GTGGTG
56551 GTGTGTGTCT AA0GCTTGCA GTTGTCTTGC AG0CTTTTGC T0CTGTGAGG
56601 AAAGGGTTGT G00CTGG00C 0G00CAGGGC T0GGGTTAGG ATGAG00CAA
56651 GCTCA00CA AGCTCT00CT TA00CTGGTG GCAG0000CTG CTGGTAGTGG
56701 CAIT000TAT AAGAGAAG0C CATG00GGCA GGACATCA0C AGCTGT00CT
56751 TGGCTTTGGA TGGGTTGGGG AGGAGG0CTC TGGAGGGCAC CAC0CTGT0C
56801 TG0CTGT0AG TCTGAG00CT GTCTGGTTTCT OCTGAGGAAC A0GT0CTGGC
56851 AATGAGAGCT GGTGTGAAT GTGCAGCTTT C0CAAG0CTC GAGAGGTAAA
56901 TGGAGCAG0C TCTCTGGTAC AGGCTGT00C AAGTTTCTAC AGTCTCTGGGA
56951 TCAITTTCTC CAGAAAAG0C CTGTGGAGTT GAGCAGTGGG AAGCAT0CAT
57001 C0TAGGGTTC TGATGGTCTT TTGGCAC00C AG00CTAGCT GGAITCTGCT
57051 GTCAGGCTAC CTGTCA00CA GGGCTGGGTC CTGG0CACTG AATGAGGGCT
57101 A0GAGTGGGG GTGGTGATTG AGA0CTGACT GAG000CTTC AGGTGAGAGA
57151 AGTAAATTGG GGGTGAAGC G00CTTATTTG GGAGATGCTT GTGAGAGAGG
57201 CTGCTCATAC AGGGGAGGGG CTCACAGCAT TCA0GATGTA CCAGGCT0CT
57251 CA0CTGTATA AGGCAAG0GT GTTTTCTGCA A0CTGGTTGT TGATGGAAG
57301 GGAGGCAAG G0CAAAGAAC CATAACTAAT GGCTGGGCTT CAGGAGAAAG
57351 TGGTCAITGT CTCTGCAGAC TGCAGAGAGG GAGA0GGGAG GGAAGGTGTG
57401 TT0GCTCTTC TG0CAAGGG C0CTAGAGAC AGAGAAGAGG GATGTCTTTG
57451 TCATAAG0GA TCACAGGGGA CTOCTGAGGA CTGGGGAGGG CTCTCTGTAA
57501 CTTGGGAGGT T000CAGTAG GTAAATTGAT GGATTTTCTT C000CACAGT
57551 GCGAAAACAG GAGATCATTA AGATTACAGA ACAGCTGATT GAAG0CATCA
57601 ACAATGGGGA CTTTGAGG0C TACA0GTAAG TAGAGAC0CA TTTTPTTTTG
57651 TGA0CTAAGT CATCT00CAA G00CTT00CT GCTT0CAGAC AACAAITAGG
57701 A00CTGGGGA AAGGGAGGTT GGA0CTTGGG CAAAGTATCT GAGTTAAG0C
57751 CTCT0CTAAA CTGGGAG00C TT0CAGGTAG ATT00CTGAG CTCAC0CATG
57801 GTAT0CTGGC AGTGGG00GA AAGCACAGGG CTGAGTGGCT CAGCAGGCAG
57851 G0CTGGAAGA TCTTTGCTGT CTTGTCTG0C ATGG0CACAG GTAG0CTGCT
57901 GCTACTGGAT AGACAC0GCT GATAAGGAAG GAAGACAAGT CACT0CATAG

FIGURE 3S

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

57951 AAGOCIGATA GGCTGCTTTT TTTTTCCTOC CTGTAGGAAG ATTGTGATC
58001 CAGGOCCTAC TTCTTTTGAG OCTGAGGOC TTGGTAACCT CGTGGAGGG
58051 ATGGATTTC ATAAGTTTFA CTTTGAGAAT CGTGAAGTGG TTGCTGCTGC
58101 TGATATACCT CTGCTGCOO CTTTACCCCT TTGCTCTGT CTGCTGCTCA
58151 OCTTCTCATC CCAGTIGCOO ACTTTTCCCT TATTTGAACT TGTGCTGCA
58201 CTCTACTCT GTATGCTTGT CCOCTTGTC CCOGATGGTT GTAGACAGGC
58251 AOCCTTGAG GCOCTGCTOC TGAGCTOCOA GTGOCATTCA TTCTGCAGCT
58301 GCTTTGTGGC AGTGCCAGTC ACCACAATCA AGCTCACTTA TTCTTGCOO
58351 GGCGGGTGG CTTACGCTG TAATCCCAAC ACTTTGGGAG GCTGAGGCTG
58401 GCGATCAGC AGGTGAGGAG ATOGAGGCOA TOCTGGCTAA CAGGTGAAA
58451 GCGATCTCT ACTAAAAATA CAAAAAATA GCGGGCTTG GTGGCAGTGC
58501 CTGTAGTOOC AGCTACTCG GTGGCTGAG CAGGAGAATG ATGTGAACT
58551 GGGAGGCAGA GCTTGCACTG AGOCAAGATC AGGCCACTGC ACTOCAGCT
58601 GGGCAACAGA GCAAGACTOC ATCTCAAAAA AAAAGAAAAA ATTATTTAAG
58651 OCTCACTCT TTCCAAGAG GATTGGAAG AAAOCCCTTG AGATTAGGTT
58701 GAGATGATCT CAGCACATAA GAACTAAGCT CTGTGCTGC AGGTTCACA
58751 ATAGAGGAAA TTAATAACAG GATAAGAAITG TGCAAAOCAG GCGACTGTTG
58801 GTGATTGCG AGATCGAAG TTGTGGCTAG AATCTTCTG ACTATGGAGG
58851 AAGGCAGAGC TCTTGATAG GGGGTGGGT GTACATTCTG GACAGTTGCT
58901 GGAATAAG GGGATAAGAA GCTGAATCAT CACCCCTOC CATCTTCTC
58951 TCTGCTCTAT GAGAOCTOC OCTTCTTAT TTTTATCTCT TOCCATTTA
59001 TGCTGGGCT TOCTATCTT GCOCTGAGTT ATAGTTAGTC ACTAAGTCT
59051 CCGCTGGCT CCAOCTTAT CACATCTCAG CTACATATAT AAACCTCTG
59101 TTATCTAAGT AATTCTATTA GCGAGAAGCA ATTCCAGAGT TTATATTAGT
59151 ACTAGGAAGG TGTCTATAG CCOCTGTCTA ACATTTGAAT TGAATAAAA
59201 TGTGAATCTC AATAAAGCA ACACAGTTT CACAGCATAT GCTGATAATG
59251 GCAATCCAC TTCTTTTGOC TTTTCCOCAG AGAATCTGG GAATATCTG
59301 AGCTTGGTGC TTTGATGATT CTATTTCAGC TTTGGTGCT TAAAAAAT
59351 TACAAATCAA TTTTGAATGG TTTAAGTTCA TGATTTTGT CTGCAGCOCT
59401 AGCTAGGGGT GAGCAAGOC TTATGAAATC TAACTCAGC CTACAGAAAT
59451 AGAAATCTA TAGGCTTAG TTAAGAGTCA CATGGTCTG AGTTGAGTG
59501 TGTGATTGA GCAATTATT OCTTGAGCT ATTTCTCAT CTTATAATGA
59551 AGAAATATT ATOCAACAAG AAATACAGCT CGGCATGTA AAAOCCAGC
59601 ACAATGCTG ATTAAAAGC CAGCAGGTAC TGTCACTGTT AOCATCTTT
59651 CTGTCTCTT TGGATAAAGG AGACTAATGT AATGTGGCAT OCTGGCTCT
59701 GGGGGGTT CAGGGGTTG GGGGTGGGG GGGGGGTAC TTGGAGATT
59751 TGGAGTGGT TGCTTGGAG ATGGTAAGAC TTGGAGTGC AGGCTGGAG
59801 GAAATGCAAG GTGCOAGGC CTGATGTCT CTTAOCCTAC CCAOCTGCC
59851 CTGAGTCTT GTOCAAGAAC AGCAAGCTA TOCATACAC CATCTAAAC
59901 CCACAGTCC AOGTATTTG GGAGGAAGCA GGTGCTATG OCTACATOG
59951 OCTCACOCAG TACATOGAG GGCAGGGTGC GOCTGCACC AGCCAGTCA
60001 AAGAGACCG GGTCTGGCAG CGTGGGATG GCAAGTGGCT CAATGTCCAC
60051 TATCACTGCT CAGGGGCOO TGCOGCAOG CTGCACTGAG CTCAGOCACA
60101 GGTGCACTG GTTGAAGGG GAGAGGGCT GGAAGGGCT GGGATAGGTG
60151 GGTGAGAGG AAGAAGAGAA GGCTGGGAG TGGTCTGGG AGAGGAGGTG
60201 TGGGCOGTC CAGAGGACTG GCAAGGCTG GCAGAATGGT TGCAATAAGT
60251 TATGCTTGA AATCAGACAG ACTAGGGTCT GGCTOCTGA CTCCAATTG
60301 GATGACCTCA GACAGGTAC TTCCOCTOC TAACTGTTT CCTAGCTGT
60351 CAAAGAAAG CAGAGAGTGG TGCTAOCCT ATTTAATCAT TGTGAGGATT
60401 AAGTAAGATA CTATAAGTAA AGCACTTAGT TAGTCTTAG CAAATGGAG
60451 CGAGTTTGT ATTTAAGCAT TAGCTTCACC CACTTTCCO ACCTTCTCAG
60501 GCGACTTGG CCATGTGTT AGGTGCTAA AGTGTCTGA ACTCATCTGT
60551 GTGCTCATG TOCTCTGTC TGTTACCACA TTCTGTCTG TTTGACAGG
60601 GCTTTAGGAG ATTCCAGOC GAGGTCCAC CTTCGCAGC AGTGGCTCTG
60651 GAGGCOCTGA GTGACAGCG CAGTCTGTT TGTTTGAGGT TTAACAAT
60701 TCAATTACA AAGCGCAGC AGOCAATGCA GCGOCTGCA TGCAOCTC
60751 CCGOOGOC TTCTGTCTG TCTGTCTGT AOCAGGTGT TTTTACATT
60801 TAAGAAAAA AAAAAAGAA AAAAGATTGT TTAAGAAAAA AAGGAATCA
60851 TACCATGATG CGTTTAAAA CCACGACAG CCOCTGGGTT GCGAAGAGG
60901 CAGGAGTATG TATGAGTTC ATCTGGCAT GAGCAGTGGC TCAOCCAOG
60951 GCTTGAAGA GGTGAGCTG GCTCTCTG TCCCATGGA CTTAGGGGA

FIGURE 3T

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

61001 CCAGGCAAGA ACTCTGACAG AGCTTTGGGG GCGTGATGT GATTGCAGCT
61051 OCTGAGGTGG OCTGCTTAOC CCAGGTCCTAG GAATGAACCT CTTTGGAACT
61101 TGCATAGGCG OCTAGAATGG GGCTGATGAG AACATCGTGA CCATCAGAAC
61151 TACTTTGGGAG AGAAGCGAGA GCTCCAGCC TGCTGTGGAG GCAGCTGAGA
61201 AGTGGTGGOC TCAGGACTGA GAGCCCGGAC GTTGCTGTAC TGCTGTGTTT
61251 AGTGTAGAAG GGAAGAGAAT TGGTGTGCA GAAGTGTACC CGCATGAAG
61301 CCGATGAGAA AACTGTGTGT AGTCTGACAT GCACTCACTC ATCATTTTCT
61351 ATAGGATGCA CAATGCATGT GGGCCCTAAT ATTGAGGCTT TATCCCTGCA
61401 GCTAGGAGGG GGAGGGGTGT TGTGCTGCTT GCTTGTGTGT TTCTTCTAAC
61451 CTGGCAAGGA GAGAGOCAGG CCTGGTTCAG GCGTCCCGTG CCGCTTTTGG
61501 OGGTCTGTGT TCTGTGCTGA TCTGGAACAT CTTTGTCTTG CCTTTTCAOG
61551 GTAGTGGTCC CCATGCTGAC CCTCATCTGG GCGTGGGCGC TCTGCCAAGT
61601 GCGCTGTGG GATGGGAGGA GTGAGGCAGT GGGAGAAGAG GTGGTGGTGG
61651 TTTCTATGCA TTCAGGCTGC CTTTGGGGCT GCGTCCCTTC TTATTTCTOC
61701 TTGCTGCAAG TCCATCTCTT TTCTGTCTCT TGAGATTGAC CTGACTGCTC
61751 TGGCAAGAAG AAGAGGTGTC CTTACAGAGG CCTCTTTACT GAACCACTGA
61801 AGTATAGACT TACTGCTGGA CAATCTGCAT GGGCATCAOC CCTCCCGCA
61851 TGTAACCCAA AAGAGGTGTC CAGAGCCAAG GCTTCTAOCCT TCATTGTGCC
61901 TCTCTGTGCT CAAGGAGTTC CATTCCAGGA GGAAGAGATC TATACCTTAA
61951 GCAGATAGCA AAGAAGATAA TGGAGGAGCA ATTGGTCAITG GCGTTGGTTT
62001 CCTCAAAAC AAGCTGTCAG ATTTATCTGC ACAACCATCT CCACTTTGG
62051 GGGAAAGGTG GGTAGATTCC AGTTCCCTGG ACTAOCCTCA GGAGGCAOGA
62101 GAGCTGGGAG AAGAGGCAAA GCTACAGGTT TACTTTGGGAG CCAGCTGAGA
62151 AGAGAGCAGA CTCACAGGTG CTGGTGTCTG GATTTAGOCA GCGTCCCTCG
62201 AGCAOCTCAT GCATGTCCCA GCGCTGGGC CCTAGCCCTT TCGTCCCTG
62251 CAGTCTGACG TGCCAGCAGG CAAATCCCTT CAOCACAGGG TTTGTGTTTG
62301 CTGGCTTGAA GACAAATGGT CTTAGAAATC ATTGAGAOCC ATAGCTTCAT
62351 ATGCTGTCTC CAGCCCCACT TCTTAGCATT CTTACTCTCT TTCTGGGGCT
62401 AATGTCAGCA TCTATAGACA ATAGACTATT AAAAAATCAC CTTTTAAACA
62451 AGAAACGGAA GGCATTTGAT GCAGAATTTT TGCAATGACAA CATAGAAATA
62501 ATTTTAAAAAT AGTGTGTTGT CTGAATGTTG GTAGAOCCTT CATAGCTTTG
62551 TTACAATGAA ACCTTGAAC TAAAAATATT AATAAAATAA CCTTTAAACA
62601 GTCCATTGTG TTAGTCTGTG TGGAGGTTTA CGGCCAGAGG CGTAGATTTT
62651 AGCAGCTGG GTTACAGGT TGGAGAGAGT AACTCTCTCT ACTCCCTTTG
62701 GGTACTTTTG AGAATAAAAC TTCTTCATGC CTGTAATCC AGTACTTTGG
62751 GAGGCGGAGG CGGGCGAATC ACGAGGTGAG GAGTTGAGCA CCAGCCTGGC
62801 TAAT (SEQ ID NO:3)

FEATURES:

Exon: 1690-1694
Intron: 1695-2000
Exon: 2001-2095
Intron: 2096-14208
Exon: 14209-14268
Intron: 14269-21854
Exon: 21855-21909
Intron: 21910-22781
Exon: 22782-22847
Intron: 22848-25768
Exon: 25769-25841
Intron: 25842-25986
Exon: 25987-26089
Intron: 26090-26492
Exon: 26493-26576
Intron: 26577-27019
Exon: 27020-27114
Intron: 27115-27753
Exon: 27754-27876
Intron: 27877-32559

FIGURE 3U

Title: ISOLATED HUMAN KINASE...

FIGURE 3V

REPLACEMENT SHEET
Docket No.: CL001158DIV2
Serial No.: 10/623,505
Inventors: Jane YE et al.
Title: ISOLATED HUMAN KINASE...

ATGTTGGATGGTGGTGCACAGCGCGGTGTGTGTCATGTACGTGAGTGTGACTAGAG (SEQ ID NO:5)

8632 GAOCGGGGGCTCTGCTGCTTGGGAAGAAGATGAAAGGCACTCAGGAGGGCAGCAAGTGAG
GOCGCTCCCATGGAGGCGCTGAAATCAGTGGGGTTCAGGAGTTTCTCACATOCATGTT
TAGGGTCATAGGCACAGACCTGCAAAATAOCCCTTGCAGAGTTAAGAATGTCTTTGAGAT
TGGAACTTGGGAGAGTOCTCAGTCAGAGTAGGAATGTGCATCCTTTTCCAOGTACAGAGG
ATTGTATGTTTACGTGGCAGCAGGATCTTAITTTGAAGCTAGTGTGGCATTGTGTTTTT
[T, -]
TTTTAGGAAAATGTCACTAAGTCAAGCAGGCGCATOCTTGAGAGGGCATGGAGAATCTG
TGGCAGCGCTOCTTGGCGCGCTGACCTGGCAGAGGAAGGAAGGGCAITGGAGTAGGCT
TCTGTCTTCAGGCGCAGGGGGAGGTGGTTTCAGGGCAGGCTTGGTGCACCGCTTGGCTG
CAAGCTATCACTOCTATCTGCTTCTCTTTCTGCTOCCCTGGTGCATCTGGTCACT
TCTTGTCTGCGCTTCTGTGAATGTGGCACTTGGACCAAGTCTGAAGCACTTGGGCA (SEQ ID NO:6)

19366 CTCAGGAGGCTGAGACAGGAGATGGCTCAAGACAGGATCTCCAGCGCGCTGGGCAAC
ATAGTGAGACCTGTCTCTTAAAAAAGAAATATGAATCTGTCTGTCTAAATAG
GCACTTAGAATGGCAGTCATTTCTOCTCTTGTCTTCAGTGTCTGTAAATTTCTTTAC
AAATTAATAAATGTGATAGCAGTCTTATTCAGATACAGCTTCTOCTOCTOCTOCTGT
CTTGGCAGGTGCTTGTCTTGGGCGACACATCAAGCTGTCTCTCTGCTGGGTGGCTA
[G, A]
AAGGATTAGTCTTCTTGTCTCTCTTCTCTAATTCCTTTCCTOCTTCTOCTOCT
CTGGGCTCTGTGTGTGGCTTCTTGGAGAGGGCAGAGCGCAATGACTOCATGTCTAGGC
AGAGGCTGGGTGCTGCACTTCTTGGCTGTCTTGGCTTGTGTGTGGCGGGGCG
AGGTGTGTGTGGGCGATGGGTGTGTGGCATGGGGTGGGTGTGTGTGTGTGTGTGTGT
CTCAGTGCCAGGCGCAGGAGCTGAGTGGCTOCTCTCTGAGATGGTTGTGAGCAT (SEQ ID NO:7)

23770 CCGCTCTGCGCTTTTCTTTCTTTGACAAATCTGGTGTGCTCAAGCCACTGTGTGAG
GCTCTGGCATGATOCAGAGGTGCAGAGCATGGTTTCTGTCTGAGGGAGTGGAGAGTT
CTGGGCTGATATCAACCATAGAGCGCGGGAGCTTTCAGCTCTGTCACTTTGTCTOCT
AGACCATATGACAGCGCTTGGCGTGGGCTOCTOCTAAGTGGAGCGGTTCGCGGCGCA
CATGCTCAGCGCTCTGCGCTOCTTGAATTCCTGGTGTCTOCTCAGCGCTCTCAGG
[T, C]
GCTGTTCAGCTGCGCTTTTCTGCTTGGCTCTTTCGCGCTTGTCTTTCTGAGGGT
GATGTCTTACAACTGGTTTGTGATCATCTGCTGCGCTTATCTGGCTTATGTGGCAG
CTCTGGCTGTCTTGGAGAGTGGGGAGTGCAGCTTCTCAGCAATTTCTCAAGCTTGTG
AGGCAATGTCTTGTGATCACTTCAAGTGTCTGAGCTTGGGAGAAATTTCTCAAGTGGG
GAGATGAATTCAGTGCCAGCGGAGGAGCGCTCTGGGAGGAGGAGGAGTGTGATG (SEQ ID NO:8)

31013 TCAGGAGCGGTGGCTCACACCTGTAGTCCAGCCTTTGGGAGACAGGGTAGGTAGATC
ACTTGAGCGCGAAGTTTGAGACAGCGCTGGGCAACATGGCAAAACCGCATCTTACAAA
AAAAAATCTTTAAAAATAGCTGGTGTGGTAAAGTGGCTTGTCTTGTGGAGGCTGA
GATGAGAGGATCACTGAGCTGAGAGGTGGAGGTTCAGTAAGCCATTTATGTGTCTAC
TGCACTOCTGCGCTGGGCAACAGAGTGTGCTGTTTCAAAAAAATTTT
[A, T, G]
TTTAAGGAGAGGCTTAACATATAATCTATAGAGAAGATCTAGTCCAGAGGAAAGAGTTGA
AGATCTTGTCTAATTTAGGAAGCAAGGTTTGGACAGCAGAAAAAGAGAGGGGCTOCTG
AGCGAAGGGCAGGGGTTCATTCGCGGATGACATGATTCCTGAGACTTCTATAGT
GTGGAGGAGGTGAAGATGGCTTGTGAGTGAAGTCTGAGCTGAAGGGGTTCTGTCTG
ATGACCTCTCATTTTGTCTTTGGAGAAATTTACACCGAGGAGGAGGTAATGAGAGCT (SEQ ID NO:9)

33206 CCATGCTGTCTCCAGGAACCTTCTCAGGTATGTTTCCAGCTGTGTACTTTGATATGC
CGAGGTGAGTGGATCAGGAATGGGCTGTGTGCGATCCCGGGCAOCTGGGTTCCTGGC
GTCTGGGCGACACCTTGACAGGGCGAGTGGAGTCTGTTTTGAGGGCTGTCTGTCTG
TGCTGAGTCTGCTOCTGAGATTCAGGGGCTGGACTCACATTTGTGAATGTCTOCTAG
AACTTCCAGGAGTAGCTGCCAAGTGTCTATGTACCTTGTCTCTGAGTTCTTAT
[T, A]
AACTCTCTGAAGACTCTCAGCACTTTACAGATTTAGCCATTTAGGATCTTGGAGATG
TGCTGGGGGAAGAAAGAGAGATGAGGTACAGTGTCTTCTCAATTTGCCAAATTTGCCAC
CAITTCATTTGCGTGTGGAGATCTCTTACTTCATTTTGTCCAAGTGGAGTACTAAT
AGAAATTTATTCAGATGTTTAAACCTTTTGTGGGACTTGTGCTTAAATAGTCCCTGAG
ATACTAGCTATAACAGTGAAGAAATAAGACAGCAGAGAGAGGGAAGGAACTTGTCT (SEQ ID NO:10)

FIGURE 3W

REPLACEMENT SHEET
Docket No.: CL001158DIV2
Serial No.: 10/623,505
Inventors: Jane YE et al.
Title: ISOLATED HUMAN KINASE...

33263 TGOOGAGGTGAGTGGATCAGGAATGGGCTGTGGCATGCGGGCACGGCTGGGTCTCTCTC
GGGTCTCTGGGOCACACCTTGACAGGGGAGTGAGGATCTGTCTTGAGGGGCTGCTGC
TGCTGCTGAGTCTCTCTCTGAGATTCAGGGGGCTGGACTCACATTTGTGAATTGTTTC
TAGAACTTCCCAAGGAGTAGCTGCCAACCTTGCTATGTAOCTTGTCTCTGGAATCTT
ATTTAACTCTCTGAAGACTCTCAGCATTACAGATTTTAGCCATTCTAGGATCTTGGAG
[G,A]
ATGTGCTGGGGGAAGAAAGAGAGATGAGGTACAGTGAGTCTTCTCAATTGOCAAAATTGC
CACCATTCATTGCTCTGGGAOGATCTCTTACTTCATTTTGTCCAAGTGGAGATGACT
AATAGAAATTATTOCAGATGTTTAAACCTTTTGTGGGACCTTGTGCTTAAATAGTCCCT
GAGATACCTAGCTATAACAGTGAAGAAATAAAGAACAGCAGGAGAGAGGGAAAGGAATCTG
CTTAAATTTGCATAAAGAAATTGGGAGAGGTGGGACCAATAATTGTAAATCATACTTGAC (SEQ ID NO:11)

33859 TTGACATTTATTTTAAAGATGCAAGACACTOACTTCCCTCTTGCCCCAACCTCACCCC
AACCCCTATTATTTGTTGCTTCAATTGGGAAGCACAGTGCGCTTTTGTGAGGAAAAGA
TTAATGTGAGACTGAAGACAGAGAGGGCTCTGCCAGCTTGOCATCTCCCCGGTCTCTC
CTTCCCTCTAACCCCTTGCTCAGCTGTTTGGTTCAAGACCCCCCTTCTCTTCCCATTA
ATAAGACTTCCCTTCTCTTCCCTCTGCAACCATGGAAGGGGGTGTGTGGGAGC
[C,A]
TAAGCCACCACTCAGTGGGAGCCACTTCTGAATACCCGTCTGCTGGGCTGGCTGGCT
GGCTCCAGGTAAAGCCAGGGCTTGCTGTGAGGATGCTGCAGGCAGGGAGCTAGGGCT
TGCTGGTGTAGCCTGAGAGCCATGGAGCTCCGGAAGGCCAGGGCTGGATAGTGAGCCCG
GGCTGGTGGTGGCTGGCTAGGCTTCTCTTGAACCTGGTTTGGGCTTGATCTTGT
GTATGGGTACCCAGAGCGGCATCTGTGGTGTGGCTCCACCTCTGCGAGATGGGAACA (SEQ ID NO:12)

37254 CATTATTTCTGCGAGTCTTCTCTGCTCACAGGTCCAGAGAGTGGACACTGGGGAAGGGT
GGCAGCTAGGACCCAGTGAACCTGGTGAGGAOCTGCTCAGTGAAGGCTTCAACCCCTGG
CAAAACCCCTCTGTAGGTGGTCTGTTTCTGTGTCTGTGTCTGTCTGTCTGTCTGTCTC
CTGTGTGAACCTGTGACACTCTGCTTCTTGAGAACACTCAGGAGATGTCTTGCATCTTGC
AGTTTGGCCATCCAGAGAACCTTCCATGGCACCTAGGGATGGAGCCCTCACTCTTCAACC
[T,C]
GGCCTCTGCTTCCAGGCTGGGTGGAGCTGTCAAGGCAGAGTCCCCAGTGGCCAGG
CGGCTCCAGTACTGAGCATGGTTTCTCTCTAAGTGTGTGATCCATGCCCTCTCTCAC
GCAGAGGAGATCTGAGGTGCCACCCCTAGGGCTCTGAGGCCACTCAAGATCCCTCTCT
GCTGAGAGGCTATAGGAAGTGGCTCTTTTGGGGGTGTGGGAGACCCCTTGGCCCCCTGT
CAGACACAGCACTCTCTGTGTGATCTGGCTGCCGACCTCAGGTGGGGAGAGGTACAA (SEQ ID NO:13)

40809 GTGGCAAGAGAAACAGAGGAAGGACAGAGAGGTAGGGGCAAGAGAAATGTGCAGCAG
CTGCAGCTCTTCCAGGAACCTGAGGATGAGGGCTGGGAGACACATCATTAGGTAAAGG
CTTTAAATGAGGAAGTGGTGGGGAACCTAGCCCTGCAATGTGTGTGTGTGTGTAOCTG
ATATGTCTCAGTAAATGAGTTTATGCCACATCTCTTTGAGAAAAGAGCTTCAATATCA
TGGTGGGAACAGAGGCAATGATCACCCAAAATTAAAGGCCAACCGCTATTGCGAGC
[C,A]
GTTGTGATGGGAGGGTTAATATTTTATTTGAAGAGTTCTGTGACAAATAATCCCTCT
TAAACCCAGTAGAAGCTGGGCTGGTGGCTCAOCCCTGTAAATCCAGCACTTTGGGAGG
CCGAGGGGGTGGATCAOAGGTGAGGAGATGAGACCATCTGGCTAACAGGTGAAC
CCCATCTCTACTGAAAATACAAAAAATTAGCCGGGTGTGGTGGCAGGGCTGTAGTCC
AGCTACTTGGGAGGTGAGGCAGGAGATGGGTGAACCCGGGAGGGAGCTTGCAGTG (SEQ ID NO:14)

41025 TTTGAGAAAAGAGCTTCAATATCATGGTGGGAACAGAGGCCAATGATCACCCAAAATTA
AAAGGCCAACCGGTATTGCGAGCCGTGTGTATGGGAGGGTTAATATTTTATTGAAAG
AGTTTCTGTGACAAATAATCCCTCTTAAACCCAGTAGAAGCTGGGGTGGTGGCTCAAG
CCTGTAAATCCAGCACTTTGGGAGGCGAGGGGGTGGATCAOAGGTGAGGAGATGAG
ACCATCTCTACTGAAAATACAAAAAATTAGCCGGGTGTGGTGGCAGGGCTGTAGTCC
[T,C]
GTGGTGGCAGGCGCTGTAGTCCAGCTACTTGGGAGGTGAGGCAGGAGATGGGTGA
ACCCGGGAGGGAGCTTGCAGTGAGCTGAGATGTGOCACCTGCACTCCATCTGGGTGA
CAGAGCAAGACTCCGTCTCAAAAAAAAAAAAAAAAAAAAAAAAAAACCAGTAGATAGGC
TAGGTGTGGTGGCTCACATCTGTAAATCCAGCACTTTGGGATGCTGAGGTGGGCTGATCA
CTTGAGGCCAGGAGTTGAGAACAGCCCTGGCCACATGGTGAAACCCCTCTCTACTAAA (SEQ ID NO:15)

FIGURE 3X

REPLACEMENT SHEET
Docket No.: CL001158DIV2
Serial No.: 10/623,505
Inventors: Jane YE et al.
Title: ISOLATED HUMAN KINASE...

- 42232 GGAAACGTAGTGAGACCCATCTCTTAAAAAATAAATAATAGCTGAGTGTGGTGG
AAOGTGOCTGTAGTCCAGCTACTTGGGAGGCTGAGGTGGGAGGATTGCTTGAGCCAGG
AGGCTGAGGTTACAGOCAGGATCACACCACTGCGCTCCAGCTGGGTGACAGAGTGAGGC
TCTGTTTAAAAAATAAATAAGAGAGAGAGAAAAAAGATTGGAGACATTTGAAA
AGCCAGTAAGGAGCCAGACACAGTGGTGGTACCTATAGTCCAGCTACTCAGGAGGCTG
[T, C]
CGCAGGACAGAAATTGCTTGAGCCAGGAATTGAGGOCAGCTGGGCAACATAGTGAGAAC
CCCACTCTTAAAAATGTTTAAATTTAAAAATAAAGATTTTTAAAAAGCCAGTAAA
TGACTAAATAATTTATGGGAAATCTACTTAATAAACTATTTCAAAGTTATTAATTTTCATG
ACCGTAGGGATATTTTAAAGTAAAAATAAAGTGCAGAAATGTTTATATTAAGTGAAGGA
AGTGGTATATTAAGGAGTACAGACAAGCCAGGCAAGGTGGCTCAAGCCGTGTAATCCAGC (SEQ ID NO:16)
- 50477 TTGGGACCTGAACATCAGTTCTTGGAGGCCCCCTTGTAAACCTGCTCAGCTCTCTCTT
TGCAAGCCAGAGAAAGAGGGCTGGGGTCCCACTCTGATGTTGCTGAGGTCT
CCAGGCTCTGAGGTGCTCATGCTGGCTAAGTTCTCTCTGGGCTCTCCAGGGGTCTG
TGTGCTCTTGGAGGTCTCTGCTAGTGGTGGCTAACTAGAGAGTCAGCAGGGGGTGAC
TGGGAAGAGGGAGGTTGATGTTGCTGCTACTCCCTCTCTGGGACCTCATACAC
[G, A]
TGAAGTGGGGCTGGGGCCAGGAAGTGGGAAGGCAGAGGGGGGCGAGTGGGCAGCT
CTCTGGGCTCAGCTTGTCTGAGGGGGCTCTCTGCTGGCTCTTCTGGGAGCTCATTC
TTCTGCTCATGTTCTGCTCAGACATTTCCCGTGATGAAGCTGTGGGGGGGGGGGGC
CTGTGCTCAGTCCACAGCTCTCTAGTGTAACTGCCCCGTGGGAACCCATGTGGAA
AGAGCCCTCAGAACTGACAGGAATCAGGGACAGAGGCTCTGCTGCTCAGCTCTGGGCA (SEQ ID NO:17)
- 55352 TAGTAGCTCCAGGCCCCGTGAGTGAGGTGAGATCAGTTTGTATTCGGCCTGCTGGCA
ACATAGGAGGGCTGTCTACTGCTGGGCTCTGGACCTGTGGCTGGCCCCCTGGAAATC
TTCCCCGGGATCAGGGGTCTTGGACAGGCTGTGTAAAGCTGTCTGGAAGCCACAGCC
CAGGTCTGGGCACTGCTGGTGGCTCAGCTGGGAGGCTCTCTGGCAGAGGGGGGGGGC
GTGGGATGTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT
[A, G]
CAGCGCCATGGGCTGGGGCTGTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT
TTGGCTGCTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT
ACTGGGAATGGCAGCTGGTGGCTGAAGGAGGAGCTCCCGGACAGAACAGCCCCCTCT
GCAGGCTGCTGAGCCCCAGCTCTCTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT
TTCTGGCTTGGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT (SEQ ID NO:18)
- 55914 CTGCTCTGAGGCCCCCTCAGGGAACCCCAACACAGCTGTGAGTCCCAACCTGCCCCG
GGTAGTAGCTCTGGGAGCATGGCTCTGCTGGGGGTGGGGGTGAGCTGGAGGTGCTGT
TGAGAACAGGAGGGGGGCTGAGTCTGGGGGCAAGAAATATGAGAAGTGTGGGTGGA
AAAACATGGCTGGGATGAGGGAGTGAAGAGCCCCAGGATGTGAGTGGGCTGCTGCT
CAGCGCTGAGCCAGGAGAGGAGGAGTGGAGTGGGCTGCTGCTGGGGGTGGGAGTGGG
[A, G]
TGATGGGAAATCTGACAGGAGGAAGTGTGTGGGATGTAGTCTCTGAGTCTCA
GCATAACAGTATTAAGAGCATGGGCTCAGAGGCAAGATAGATCTGAGTTTAAATCCAGC
TACACTGCTTTCAAGAGTGTGAAGTTTAACTCCAGAGCTGCAGGTCTCTATCTGTAA
TGTGGAAATAAATGGCAAGCACTCAGAGCTTGTAGATAAAGACAAGGAGTGGGA
AGTCTTGATAGGCTGCTGATGGGTATCAGTAGCTCATCTCATATTTCTAGTTAGT (SEQ ID NO:19)
- 56633 TGGGGTTGGAGAGGGTGTGTGTGTGTGGGTGCACACTGCTGCTGCTTTTGGAGCCG
ATCGAAGCTCTTGTCTTCCCTTAACTGCTGCTTGTCTCACTGGAGCTGTGGCTAGCGGG
GCTGAGCGCTGTGGGGGCCCCCTCTGAGTGTGCTTTGGGCTGGGCTGCTGCTGCTGCT
GTGCTGCTTGGCTGTGCTGGGCGGCTGGGCGGTGGTGGTGTGTTCTAAAGCTTGCAGT
TGCTTGCAGCTTTTGTCTGCTGAGGAAAGGGTTGTGGCTGGCCCCGGCCAGGGCTC
[G, A]
GGTTAGGATGAGCCCAAGCTCAACCCAGCTCTCCCTTAACTGGTGGCAGCCCCGCTG
GTAGTGGCAATCCCTATTAAGAGAGCCCATGCGGCGAGGACATCACCAGCTGTCCCTGG
CTTTGGATGGGTGGGGAGGAGGCTCTGGAGGCAACCACTCTGCTGCTGCTGCTGCTGCT
GAGCCCTGTCTGCTTTTCTGAGGAACAGTCTGGCAATGAGAGCTGGTGTGAATGTG
CAGCTTTCCCAAGCTCGAGAGGTAAATGGAGAGCTCTCTGCTGAGGCTGTCCCAAG (SEQ ID NO:20)

FIGURE 3Y